Vol. X. No. 5



MAY, 1907

## WITO MOBUS MAGAZINE

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## The Warner

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#### Honolulu Floral Parade

The floral parade held at Honolulu, Hawaii, recently proved the most successful event of the kind ever held in

in the parade. Although the number of the latter was exceeded last year the interest was greater, and no expense was spared to show what results could

tion as a reeking, fiery volcano. In fact, the designs were all beautiful and all showed originality in treatment.

C. M. Cooke with his large touring



MRS. H. M. BALLOU'S TOURING CAR IN HONOLULU FLORAL PARADE. WINNER OF SECOND PRIZE, CLASS A. MR. S. M. BALLOU AT WHEEL.

the territory, and a great deal of the credit is due the automobilists who entered their handsomely decorated cars boats and even as improbable a creation of the car took first prize in its class. It was a most elaborate Chinese design, glittered their handsomely decorated cars boats and even as improbable a creation of the car took first prize in its class. It was a most elaborate Chinese design, glittered their handsomely decorated cars boats and even as improbable a creation of the car took first prize in its class. It was a most elaborate Chinese design, glittered their handsomely decorated cars boats and even as improbable a creation of the car took first prize in its class. It was a most elaborate Chinese design, glittered their handsomely decorated cars boats and even as improbable a creation of the car took first prize in its class.

with dainty lanterns and decked with clusters of peacock feathers; dragons The occupants, Miss and hangers. Violet Damon, Miss Juliet Cooke, Mrs. George Cooke, Miss Judd and Richard A. Cooke, were attired in elaborate Chinese garments, not a detail down to the golden hair ornaments being omit-This car and its occupants were greatly admired along the route of the parade and no criticism of the choice of the judges can be made in awarding to it the banner of excellence, although in making the selections among the best half dozen cars the judges had a task worthy of Paris.

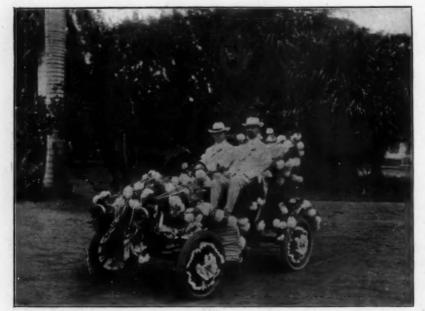
Daintily beautiful was the "Sweet Lavender" touring car entered by Mrs.

fore. There was no sign of any hasty preparation in their work, however, which won a considerable share of the admriation and applause given to this section of the fiesta. The Japanese and American flags had been worked out in panels in tissue paper, one on each side, the occupants being shaded by a roof of ti leaves. The costumes of the occupants were of rich Japanese design, handsome and elegant. These were Miss Tasaka, Dr. Katsanuma and H. Fusikawa and the chauffeur.

The winner of the third prize in Class C was the car of the Von Hamm-Young Company, driven by A. A. Young and C. C. von Hamm. It was tastefully decorated with asparagus fern and

most upon the wagon or carriage before it is observed, no matter how good their lights may be.

The hazy condition referred to which thickness the darkness was greatly discussed years ago in New England in connection with a terrible railroad accident. An express train ran into the rear of a local train with terrible results. engineer of the express train, who was accused of recklessness, told that he was proceeding as carefully as he could, watching for signals when the tail light of the local seemed to spring from the ground immediately in front of him. Investigation proved that certain conditions of the atmosphere would obscure lights se badly that they would suddenly become visible when within a few yards away. With lights hidden in this manner, how much more difficult it must be to distinguish a dark object under similar conditions.



WINNER OF THIRD PRIZE IN HONOLULU FLORAL PARADE. A. A. YOUNG AND C. C. VON HAMM.

H. M. Ballou. This design was much less striking than that of the dazzling Chinese prize-winner, but in its own way it was not less worthy. Wistaria blossoms had been most effectively used over the lavender trimmings of the body of the machine, lavender tulle being festooned over the whole. The gowns of the ladies occupying the seats matched the color scheme perfectly, their hats, gloves and parasols being also of the prevailing tone. The ladies were Mrs. Ballou; Mrs. Harry Macfarlane, Mrs. George Fairchild and Miss Lady Macfarlane. The car was driven by S. M. Ballou. The second prize for Class A was awarded to the "Sweet Lavender" car.

Japanesque to a degree was the touring car of Governor Carter, which had been loaned for the parade to the Japanese squadron, the handsome decorations being the work of the men of the cruisers, all done during the night bewhite chrysanthemums, the latter swinging on long ribbon stems.

#### Make All Vehicles Carry Lights

One of the American industries which has received very great benefit from automobiling is that of lamp making. Lamp makers have no fault to find with the laws that compel all automobiles to carry lamps and they regard hopefully the movements going on in various States to compel-all vehicles using the public highways after dark to carry lighted lamps. The automobilists have done much to give vitality to this fair and just movement, which will eventually end in all vehicles carrying lights. Every automobilist using the highways at night receives convincing impressions of the danger incurred by vehicles moving about without lights. There are certain atmospheric conditions that seem to obscure an unlighted vehicle at night and automobilists are often al-

#### Favoring the Few

When Andrew Carnegie says anything for public notice it is generally worthy of attention. In sending a present of six million dollars to the Carnegie Institute he appended this advice:

"The art department should not purchase of 'old masters,' but confine itself to the acquisition of such modern pictures as are thought likely to become 'old masters' with time. The gallery is for the masses of the people primarily, not for the educated few."

'That is a line of advice which would do good to many people and organizations outside of those interested in art. In education, in sport and in social amusements there is an overwhelming tendency to arrange things for the benefit of the select or expert few instead of the average many. In automobiling the rules are made for the convenience of the first-class automobilists and high-priced cars, in golf the links are laid out to favor the first-class players and similar handicaps are put upon the poor players who form the great majority. The same thing applies to almost every game of skill.

E. P. Earl, president of the Nipissing Mining Company, has placed his order for a forty horsepower Lozier touring car for use this summer between his country home at Lake Mahopac and the city. The car will differ from the standard specifications of the Lozier car in a special finish of Brewster green with white striping, with vermillion running gear.

Albert Freeman, president of the Trident Tire Company, has also purchased a forty horsepower Lozier touring car.

Among other recent purchasers of Lozier cars are William E. Paine, president of the Yellow Pine Lumber Company, and Maxwell Mannes, of the Municipal Realty Company.

#### Long Lane of Patent Litigation

There was considerable exultation in certain automobile circles last month on account of a decree which the Association of Licensed Automobile Manufacturers had secured against W. Gould Brokaw on the ground of infringement of the Selden patent on an automobile. A decree from a district judge is of very small consequence to people who are prepared to push the decision of a patent case to the court of last resort, which is the United States Supreme Court.

The Selden patent litigation resembles very strongly the litigation prosecuted years ago by alleged patentees of what was known as the Tanner brake. The people controlling that brake, which was made up of a variety of impracticable elements, claimed that people using certain other brakes were infringing the Tanner brake patents, and suits were entered against various railroads for damages. A large number of railroad companies compromised by paying royalties and several millions of dollars went to the Tanner brake people through these sources of Other railroad companies fought the case and a combination was formed to carry the lawsuit to the Supreme Court. Meantime there seemed to be no difficult in the Tanner Brake Company obtaining decrees against railroad companies from district court judges. At one time the claims against railroad companies were close to \$70,000,000. The Supreme Court decided that there was no infringement.

Another case that had close resemblance to the Selden patent claims was the Consolidated Safety Valve case. This related to what was known as the Richards safety valve. The inventor of that valve put a tip round the edge of the valve disk which caught the escaping steam and held up the valve until the steam pressure in the boiler was reduced The patent of the invention was purchased by the Consolidated Safety Valve Company. Other people made safety valves which imitated the Richards invention and they defended their action on the grounds that the Richards device was no novelty. In a suit which went to the Supreme Court the infringers of Richards' patent submitted evidence that a safety valve with extended edges for catching the escaping steam had been invented years before the Richards patent was issued, and that the inventions were identical. The Supreme Court held that while the purpose of the two inventors was identical the first one did not perform the functions required. The idea of holding open the valve was present to the mind of the first inventor, but his invention was not a practical success, which Richards' was. Hence the validity of the Richards invention was sustained. Great importance seems to be attached to the

device before holding infringers liable for damages.

From the precedent established by the Supreme Court it looks as if the Selden people will have to prove that it was practical, new and useful.

#### Is This an Exceptionally Light Motor?

The information has been cabled to the New York Sun that a young German engineer has invented a motor which he thinks will go far toward solving the problem of aerial navigation, especially with aeroplanes.

A feature is its extreme lightness. It weighs two-thirds of a kilogramme, or

practical success and utility of a patented speckless blue and the sparrows already glorified in the golden sunshine, chirruped cheerily as the shining motor car sped on. The comedian was in ecstasies. Of course, it was too good to last. Out of the hollow serenity of a dark thicket a blue-coated official jumped and the car came to a stop. Car and contents were under arrest.

> The gay humorist invited the official to take a seat in the car. The comedian told his finest stories in his best style. The constable was convulsed with laughter and insisted that the happy jester should accompany him to the County Court so that the comic gems could be repeated to his honor. The county justice thought that the General Sessions should have a chance of seeing and hear-



GOVERNOR CARTER'S CAR IN HONOLULU FLORAL PARADE.

about 24 ounces, per horsepower, compared with two kilogrammes, or about 71 ounces, the weight of the well-known Antoinette motor, upon which most aerial navigators rely as the lightest obtainable.

We incline to the opinion that the invention referred to is not such an extraordinary motor as the correspondent believes it to be. If we mistake not, Hiram Maxim invented and put in service a steam engine that weighed less than 16 ounces per horsepower developed.

#### A Jester in Jersey

Mr. Charles Bigelow, the popular comedian, had a sample of Jersey justice on the occasion of his first trip in his new automobile. He went across the Hackensack meadows gay as a lark and encouraged the chauffeur to let the new machine do its best. The bluebirds were prophesying spring and all the world was young. The smiling waters reflected the

ing the accomplished comedian and in the meantime \$100 would be necessary to insure the comedian's appearance.

"Can you imagine an automobile concern letting a fellow out with any money ip his clothes. Here is my watch, it is worth many hundreds," said Mr. Bigelow, still jesting.

"Nothing doing," replied the magistrate. "That's the same kind as my own watch, for which I paid \$11.25."

At this distressful point the chauffeur, who had been in the business for several years, produced a roll of currency and the comedian rolled back to the city a sadder and a wiser man.

#### Danger

Ostend-Say, pa, what are "elimination

Pa-Automobile races for the elimination of the human race, my son .-Chicago News. .

#### A Propelling Policeman

A reversal of the laws of nature seems to have happened at Rochester. We are so accustomed to hearing of policemen stopping automobiles that we had difficulty in crediting the report that on the occasion of a lack of current on an automobile climbing a hill in South avenue a policeman named Heinlein, of mighty fame and of many horsepower, put his shoulder against the rear of the auto, and behold-it moved. Sympathetic bystanders volunteered their assistance but the stalwart policeman, like Horatius at the bridge or like Samson and the Judean lion, was equal to the occasion and propelled the machine to the summit of the hill. This was not all. When the summit was reached Heinlein got into the car and started the auto down the grade. Without any other power than gravitation the automobile acquired sufficient momentum to carry it to the Erie station in Court street. When we get short of gasolene may Fortune send us a friend like Heinlein.

#### Progress in Australia

The expanding province of the automobile is being demonstrated in Australia, where it is being introduced in the delivery of mail at pastoral stations where supplies have been conveyed by bullock teams traveling at a snail's pace and occupying many days in comparatively short journeys. As a rule the roads in Australia are favorable for motor traction and when they are not they can be speedily put in order by the local authorities. Motor cars are already delivering mail at several points and running at about fifteen miles an hour, carrying mails, passengers and freight. It appears from the latest reports that the innovation is meeting with much popular tavor and the opening up of this new field will call for the manufacture of a vast number of motor cars. We will not be surprised to hear that the American agent is already in the field.

#### Four Hundred Mile "Consistency Run"

Sidney S. Breese, of the Automobile Club of America, with Alexander M. Thackara, Jr., also of the Automobile Club, gave an unusual demonstration of motor car consistency April 3, when he drove a 40 horse-power Westinghouse touring car 408 miles over Long Island roads—all of which were not in the best condition—in a single day, without violating the speed laws or breaking the seals with which the engine bonnet had been fastened before the start. The gasolene consumption for the entire run was but 39½ gallons—something less than 10 gallons per 100 miles.

This consistency run was the result of

a little doubt expressed by a few of Mr. Breese's personal friends that the Westinghouse, while well known abroad, was the right sort of a car from every standpoint. A course of 100 miles, approximately, was selected by the wealthy young co-manufacturer of the B-L-M Pirate, which lies between Southampton and Long Island City, passing through Jamaica, Babylon, Patchogue and Southampton. The day before the test Mr. Breese defined his position as follows:

"I am not going out for a record, save for one of consistency. The Automobile Club is agitating a campaign against speeding, and as a member of the club I shall certainly do my part to keep the spirit of the law. I am not going to run against time. Our bonnet will be sealed before the start and an accurate account of gasolene consumption will be kept by an observer. We will make a record of economy and of reliability; it is that which the public wants in a car. It is my humble opin-



MADAM NORDICA BESIDE HER POPE-HARTFORD, EQUIPPED WITH LIMOUSINE BODY.

ion that this sort of a run is of more importance to every one concerned than so-called endurance runs, conducted by tradespeople for notoriety's sake."

Starting from Long Island City at 5 o'clock in the morning, Mr. Thackara took the wheel, driving as far as Islip, where Mr. Breese took a turn from there to Southampton and back to Islip, from which point the other drove to Long Island City. This scheme was followed throughout the day, so that neither motorist overtasked himself. The spirit of the law was carefully observed at all times during the day, and through none of the villages or towns was the car driven at a rate of speed higher than that of the legal limit. The roads were practically deserted, so that in an occasional open place the car was allowed to shake itself out at a moderately lively clip. As far as Babylon the roads were smooth, but between Patchogue and Southampton they were heavy and muddy-the clay of that locality has something of a bad reputation. The clay was of such depth and consistency in one place that a mud-

guard was broken on the outward journey, for the car had literally to plough through it. Mud-larking is not conducive to attractive records of fuel consumption—but to the man who sells it—and the observer's figures are all the more remarkable on that account.

The car used is a 40-horsepower Westinghouse with four-cylinder, water-cooled, vertical motor. Ignition is by make-and-brake from Simms-Bosch magneto, and the drive by double side-chains. Mr. Breese, manufacturer of the B-L-M Pirate, is the American agent and distributor of the Westinghouse, which is made in France. The B-L-M will be remembered as the car that was not ready in time for last year's elimination race, and the "Pirate" of their manufacture as the racing-body car that attracted so much attention at the Grand Central Palace show.

#### Sick by Imagination

Cortlandt F. Bishop, the new president of the Aero Club, was being interviewed on aeronautics.

"Is it true," said the reporter, "that you get airsick up in a balloon the same as you get seasick on the ocean?"

"That is only true," said Mr. Bishop, "of fidgetty, highly sensitive persons, like the old lady on the train.

"She said to the conductor, as he punched her ticket:

"'Conductor, is it a fact that the locomotive is at the rear of the train?'

"'Yes, madam,' the conductor answered.
'We have a locomotive at each end. It takes one to push and one to pull to get us up this grade.'

"'Oh, dear, what shall I do?' moaned the old lady. 'I'm always train sick if I ride with my back to the locomotive.'"—
Minneapolis Journal.

Lighting the street lamps by clockwork is the latest English notion. The thing is done in Bath, England, and Birmingham is becoming interested. A patented automatic gas controller switches the lights on and off. The mechanism consists of a clock which can be so set as to light the gas each night and extinguish it each morning, so as to make an automatic variation of the time of lighting and extinguishing according to the calendar. In short, by means of a chart, the street lights are turned on and off, lighted and extinguished, at a different moment each day throughout the year, according to the season.

"Chumpley's auto got away from him and ran fourteen miles on a country road."

"I'll bet he was mad."

"No, he was tickled. He said it was the best run his car had ever made without adjusting."—Cleveland Plain Dealer.

## Popular Engineering.

What is a Watt?

By GEORGE SHERWOOD HODGINS.

The word "Watt" is an electrical term, and stands for a certain unit of power. Work, as distinguished from power, is defined as pressure acting through distance and is usually expressed in foot-pounds, as the foot is a convenient unit of distance, and a pound is a common standard of weight or pressure. When the word power is used it signifies a rate at which work is done, as work being carried on so that a certain quantity of it is performed in a stated time.

James Watt, the Scottish inventor and engineer, was the man to whom we owe the idea of a horse-power, and when the electric unit involving the idea of work came to be formulated, the name of Watt was chosen to indicate this unit, just as that of Volta has given us the term volt, and Faraday, the farad.

Watt considered that taking the average, a London dray horse was capable of doing the work of lifting 33,000 lbs. through one foot of distance in one minute of time against gravity. introduction of this time limit, the minute, gave the unit of power or the rate of performing work. This or its equivalent has ever since been called a horse-power. It is not probable that a horse would be able to perform work continuously at this rate for any considerable period of time, but for ordinary purposes the horsepower is a convenient unit. It is, in fact, work performed at the horse's rate of doing work which we refer to when we

speak of a horse-power and that is equivalent to 33,000 foot-pounds per minute, or to the raising of 550 pounds one foot high in one second, and if repeated continuously for one hour it is spoken of as a horse-power-hour.

The electrical unit called the watt is capable of being represented in terms of the horse-power, and in that form it is perhaps more intelligible to those who are familiar with mechanical, rather than with electrical expressions. The electrical watt is the product of volts multiplied by amperes, where the volt is the unit of electrical pressure and the ampere is the unit measuring the in-

tensity of an electric current. The ampere is represented as the unvarying electric current which when passing through a solution of nitrate of silver in water deposits silver at the rate of 0.001117 of a gramme per second, or a current which in each second deposits by electroplating 0.00033 grammes of metallic copper, is said to be of one ampere intensity.

The ampere, therefore, includes the conception of rate of doing something, and as the watt is the mathematical product of volts by amperes, it neces-



MARCH SCENE IN NEW JERSEY.

sarily includes the idea of rate, though not that of absolute quantity. The chemical separation involved in the deposition of pure metal from a solution in a given time becomes a measure of intensity of activity, but is not regarded as the performance of work, in the sense of pressure acting through distance.

The expression "watt per second," though correct, is not used for the same reason that the expression "horse-power per minute" is not used. The conception of horse-power involves the idea of rate, and so also does the watt, but watt-second is what is really

meant by the general use of the term watt.

Careful experiments have demonstrated that 746 watts per second are equal to 550 foot-pounds per second, or to state the equation in its usual form, 746 watts equal one horse-power. The form in which electrical power is generally sold is computed on the basis of kilowatt-hours. The prefix kilo comes from the Greek chilioi, one thousand. A kilowatt, written also k.w. is therefore 1,000 watts. The kilowatt-hour is the performance of work at such a rate that 1,000 watts

per second shall be delivered continuously for one hour.

The kilowatt-hour has a special interest for the man who has his office or house lighted by electric lamps, because the kilowatt-hour is the unit upon which the power and light companies base their charges. The kilowatt-hour is stated on the accounts rendered, to be approximately equivalent to the steady use, for one hour, of 20 standard incandescent lamps, each one giving about as much light as 16 standard sperm candles. The kilowatthour is also roughly speaking, equal to the use, for one hour, of two are lamps such as are employed in street lighting.

The mechanical energy necessarily expended for the production of light in 20 incandescent lamps for one hour, is about equal to 1.34 horse-power and the energy required to keep up the glow in one of these lamps for an hour must therefore be the twentieth part of the number just given or 0.067 of one horse-power. The expendi-

ture of this amount of energy may be more readily comprehended if stated in terms of what we may here call manpower instead of that of the horse.

In former days the power required to drive church tower clocks was obtained by the gradual falling of a heavy weight, attached to a rope which was wound round a drum. This arrangement was similar to the mechanism of a grandfather's clock. When the church clock had run down, a man wound it up by attaching a crankhandle to the axle of the drum, and revolving it until the weight was drawn up to the required height inside the

tower. If the same style of mechanism could be applied to the production of light in an incandescent electric lamp, a weight of one pound would have to be raised 36.85 feet in each second in order to maintain the glow, for one hour in one of the 16-candle power bulbs with which we are all familiar.

In every machine there is a certain amount of loss due to internal friction, so that we never get out of a machine, as work, the full amount of energy put into it. This is true of all the transformations of energy used in the arts. In a recent lecture delivered by Sir James Dewar before the Royal Institute in London, he stated that out of the total amount of energy required for one glow lamp, only 3 per cent was actually transformed into light and that 97 per cent was expended in a non-luminous form. This statement is not so surprising to those who have reason to know that in the best stationary steam engine practice, it is probable that not more than 15 per cent of the total energy developed in the burning of the fuel, is ever transformed into useful work while in the case of a locomotive probably from 6 to 10 per cent is all that is available. In a general analysis of electric light radiations, many years ago, Tyndall found that the invisible emission from this source of light was eight times that of the visible.

Taking Prof. Dewar's figures and applying them to the case before us, it is evident that out of the total energy stored up when the hypothetical one pound weight was raised in the clock tower-for the production of light, and steadily liberated during one hour by the gradual fall of one pound through a distance of 36.85 feet in every second, that a distance as great at 3534 feet per second would be traversed by the descending weight in the production of heat and in overcoming internal resistances. Further, that all the actual energy which the lamp was able to radiate as light, could be produced by the downward movement of the one pound weight for a distance of only 1 1-10 feet in each second. No light, however, would appear unless the whole distance of 36.85 ft. had been traversed by the weight. In this, however, the incandescent lamp is superior to the 16 candles which it supplants, for in their case the luminous energy produced by the burning of each one is only 2 per cent, while the non-luminous energy is 98 per cent of the total amount liberated by the consumption of the melted fuel, by the tiny flame.

The members of the St. Louis automobile club have approved of the plan to establish a chauffeurs' information bureau.

### Immense Electric Generating Stations

Niagara Falls as an electricity generating power is stirring up rivals in various places where water power is running to waste. Lake Brusis, in the Grisons, a region of Switzerland, noted for torrential rivers and glaciers, is now the scene of the most powerful electricity generating and distribution stations in Europe, if not in the world. It has been obtained by turning the stream of the Peschlaveno, in the Poschiavo Valley, at its exit from the lake of the same name, through a great conduit three miles long, to a reservoir 1,280 feet above the level of the central station, and therefore giving the highest known fall.

From the reservoir five enormous sets of pipes secured to the sheer rock conduct the water to the generating station, whence 36,000 horse-power of electricity is distributed about the shores of Lakes Como and Maggiore, and high pressure as far as the great plain of Milan.

#### Big Japanese Battleship

Japan appears to be taking active measures to make the nation feared if not respected. Last month an immense battleship, the Aki, was launched from the Kure Navy Yard, the largest and most formidable battleship in the world. An important thing about this vessel is that she was designed and built exclusively by Japanese. The displacement is 19,800 tons, being 1,300 tons more than that of the British battleship Dreadnought, which was formerly the largest vessel afloat. The length of the Aki is 492 feet and a beam of 831/2. Her engines, which are turbines, will be of 25,000 horse-power, and it is estimated that she will have a speed of 211/2 knots. She has three funnels, against the Satsuma's two. Her armor belt is 91/2 inches. She will carry four 12-inch guns, twelve 10-inch and eight

#### Early Turbine Engine

It has just come to light that as far back as 1833 the Earl of Dundonald, a distinguished Scottish scientist, invented and patented a revolving steam turbine for locomotives and marine vessels. The recent adaptation of the invention to marine propulsion has brought the invention of the early scientist into notice, and it appears that he was the author of many remarkable inventions, not a few of which failed to be successful from the fact that they were too far in advance of their time.

In the turbine for locomotives the mechanism was extremely simple, consisting of two drums attached to the driving axle. It seems surprising that it did not meet with a greater measure of popular approval, as it certainly was simplicity itself compared with the ponderous beams and cranks that distinguished the work of

other early adapters of Watt's steam engine to the locomotive. Indeed, a close examination of the printed details of the noble earl's contrivance shows a close resemblance to the turbine as now used in marine engines, with the difference that the turbine of the present day is attached to the screw shaft, while the earlier invention was attached to the paddle-wheel shaft

#### A Varnish-Making Gamaliel

"Tracing the history of what might be called 'modern varnish making' as best we can, it would appear that early in the seventeen hundreds the French people were making varnish from the materials used to-day, viz., fossil hard gums, linseed oil and turpentine. There are varnish-makers to-day in England who date their connection with the business back to the days of the poor Frenchman. The writer, although not of the same family, is one who sat at the feet of one of these Gamamiels."

The above is a paragraph from the New York Railroad Club proceedings. The essayist referred to the feet of Gamaliel. Gamaliel was a famous Jewish teacher, who had Paul among his pupils. The essayist on varnish seemed to know that, but the printer and proofreader evidently never heard of the Jewish teacher. They probably thought the reference had something to do with enamel gums.

#### End of the World Predicted

A prediction has reached here from Rome that the earth is certain to be destroyed by a comet that is coming this way. We hope that this grave intelligence will put some of the people who owe us money into the reckless mood of paying their debts.

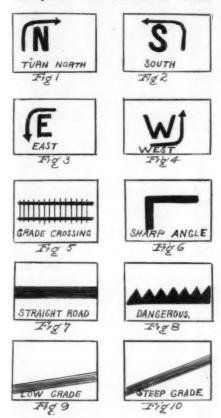
There once was in London a famous Scot preacher named Dr. Cumming, who thought he had the gift of prophecy, and he made predictions concerning mundane things based on the Book of Revelation. One time he got down so close to particulars when the earth would be no more that he named the day and the hour. Newspaper men asserted that the doctor was so sure that the end of the world was at hand that he had given orders to his family to buy coal by the bushel.

#### Will Handle Deere Cars

The Zim-Rock Motor Car Company, of New York, has taken the agency for the Deere cars manufactured by the Deere-Clark Motor Car Company, of Moline, Ill. The Deere cars are put on the market for 1907 in two models—a touring car and a runabout, both of 40-horsepower. The Zim-Rock Company also handles the Pungs-Finch cars, and Manager W. G. Houck states that the 1907 allotment of these cars has been entirely sold.

#### **Bad Signs**

It is very convenient to tourists to have certain advantages and disadvantages pointed out to them as they proceed along the road. It is encouraging to the automobilist whose machine has broken down to observe a sign indicating that there is a repair shop only a short distance ahead. There are various advantages to be derived and time and expense saved by the employment of different styles of indexing roads. These signs are not in use in some countries, while in others one finds quite an elaborate system of road illustrating of this description. Your correspondent has traveled in several



countries and the attached sign or guide posts are the result of combining the various indexes used. Of course, the simplest and best forms of guide posts should indicate the way to go. There are roads ever which automobilists run on which it is often difficult to determine the way to turn. There may be cross roads or roads at an angle. The off road may lead to nowhere, while the other road may be the one to the town or on the main line. Hence a very simple method of indicating the direction of the main road is found in the employment of the north, south, east and west guides. These are illustrated in Figures 1, 2, 3 and 4.

There are occasions when it would be impossible to put up a very elaborate sign across the road, indicating an approach to a railway track. The little guide board shown in Fig. 5, with the picture of

the dials and ties on it, serves to indicate to the tourist the proximity of the danger point.

Whenever he sees one of these signs he slows down. The signs of this character are all small. In fact, the boards are only 16 inches wide as a rule and about 10 inches high. But they are put at conspicuous points at crossings and at places where the guide boards are needed. The automobolist soon gets accustomed to watching out for these guide boards. He gets into the habit of noticing anything of the kind along the road, just as the mariner is always on the lookout for a light house or buoy. He expects to find notification of danger ahead. He has confidence in the signs. In some cases the signs are established by clubs. The contract is given to some carpenter to make a few hundred of the 10 x 14 inch, or other dimension, signs. These sign boards are then smoothed and painted with the proper figures indicating the service to be performed by them. Then the boards are attached to the top of posts and these posts are sunken into the earth. In some instances the boards are fixed to trees or telegraph poles. It is necessary that the boards be in plain view, otherwise they are of no avail. I saw some boards which were practically out of sight from the road due to the heavy undergrowth having sprung up. Of course, the boards get broken off now and then but they can be replaced.

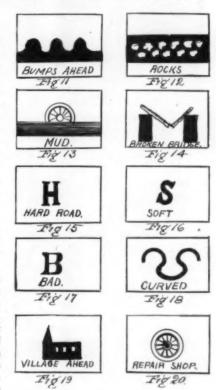
Fig. 6 shows the form of sign established when there is a sharp angle on a down grade just ahead. This advises the automobolist to slow down.

Then there are occasions upon which it is wisdom to indicate there is a straight road ahead for some miles. This gives the tourist an opportunity to speed up. He can take advantage of the straight road and this is told him by the kind of board sign exhibited in figure 7. Then there are dangerous places in roads which have to be guarded against, although the places may not be dangerous to slow speeded vehicles. Such a sign is shown in Fig. 8. When the automobilist observes one of these boards along the way he slows down. When he gets to the dangerous point indicated he may find a rough place, a bad turn, a weak bridge, a road which goes down grade with an angle without side rails for protection, a hole or depression in the road, or perhaps common bumps. He glides slowly by and returns to his standard speed as soon as the danger point is passed.

Then there are times when it is a good plan to be notified of certain grades airead. Hence the sign board with the lines across it as in Fig. 9 indicate a low grade, to which the party need not pay much notice, while the steep grade signified in Fig. 10 demands the thoughtful consideration of the tourists. Bumps ahead are always annoying to automobilists. While the average road is free

from artificially constructed bumps in these days of advanced automobiling, there are occasional obstructions of this nature to meet with on the country highways. Therefore when such places exist it is convenient for the man at the wheel to receive due notification in the shape of the sign presented in Fig. 11.

Or perhaps there is a rocky secion of road ahead. Of course, the autoist will see the rocks when he runs into them, but he will deem it a favor to be properly notified. Therefore he slows up when the signs of the character seen in Fig. 12 looms before him and he is thankful to the automobiling club which took the precaution to do all this for visiting ma-



chines. Then there is the mud sign. It looks like a wheel sunken well into the soft mire as represented in Fig. 13. It is hardly necessary to belong to the club and carry a code of their signs along in order to determine the significance of signs of this class. Some require previous instruction to get right, but many of them tell the tale on the face, as in the case of the broken bridge sign board, shown in Fig. 14. This hardly means that the bridge is down, as the town authorities would not permit it. It means that there is a hole in the boards or the boarding is broken in a place where a tire may go down. Then there are the hard, soft and bad roads indicated plainly by the letters "H," "S" and "B" as in Figs. 15, 16 and 17.

A hard road is a pleasing road to the autoist, while the soft one may be sandy and not so bad for general wheeling. The

letter "B" signifying the bad road means a bad road for the motor machines. General conditions make it so. Perhaps such things as speed restrictions help to do this.

Then there are times when the automobilist has to determine between a straight road and a curved one. The presence of the curved road is signified by the board bearing the emblem shown in Fig. 18. When running between hills or through the woods in a new country, the welcome sign of the town or hamlet ahead, where there is a hotel, etc., is always pleasing. Hence the sign board as in Fig. 19. Then when the gasolene is running low and a tire is loose or there is something going wrong, you do not want to hire a tow in if there is a shop in the near future. Consequently, signs like that in Fig. 20 are up to indicate the nearness of the repairman. In practice the marking of the sign with the terms is omitted. Only the bare characters are given-"R."

#### Car Stops Itself

A. H. Doolittle, of the Electric Vehicle Company, says:

"The ever present question of brakes is yearly becoming the subject of more careful consideration, especially so in regard to the emergency brake, which is the one link between safety and the unexpected collision.

"While very good brakes have been placed on some of the standard cars, they nearly all require presence of mind and generally a long reach of arm to accomplish the desired results. In the New Columbia gasolene touring car with direct transmission there are two electric brakes which are positive in operation and grip the rear wheels with a locking action that allows but a five per cent slip from a rigid position, this slip being just sufficient to keep the car from skidding sideways.

"A forty-five horsepower gasolene motor direct connected to the revolving field of an electric generator with a dragging or slipping armature is the power plant and elastic clutch of this car. Mounted on the armature shaft of the generator, which runs back to the axle, is the armature of the stationary field motor, into which all of the electric current produced by the slip of the generator field is retransformed into mechanical energy and aids in driving the car, thus getting additional power over the ordinary gear reduction transmission.

"The auxiliary electric emergency brakes are embodied in this electric stationary field motor, and by simply pulling the controller handle to the first rear notch on the control this field and its armature is short circuited upon itself and tends to turn as one. As the field is rigidly fastened to the frame of the car, this is impossible, and locks, with a slight slip, the driving mechanism. The feature

which would most of all appeal to the more careful motorist who tours hilly country is the absolutely automatic retarding brake, which acts in the capacity of the sprag or ratchet. Very often when ascending narrow, winding roads the motorist feels a shudder run down his column as he thinks of what would happen should the motor stall or break down and his brakes refuse to hold, and he gazes at the drop on one side and sharp turns back of him with profound respect. Here in this automatic sprag brake is probably the only one in existence which goes into operation the moment the car begins to travel backward, without any assistance whatsoever from the driver. It is caused by the motor armature on the rctating driving shaft generating current as soon as the armature commences to revolve backward, thus causing a powerful brake, with a slight slip, which will hold as long as the wheels have traction. These brakes with their powerful action seem to be a step in the right direction, for until we have such safety appliances we will continue to have those accidents which deter the more timid from the enjoyment of the sport and health which comes from motoring.

#### Golf for All Ages

Golf is a game which has attained to wonderful popularity all over the American Continent in a few years and the movement toward opening new links and establishing new clubs goes merrily on Golf is an admirable game for people too cld to enjoy the active games of base ball, tennis and such pastimes that involve vigorous exertions, and it has come to be called on old man's game. In the United States the game has the most devoted adherents among old men, but if a person wishes to become an expert player of golf youth is the time to acquire the skill. This rule has its exceptions, for we know a railroad man who never had a golf club in his hands until he was over sixty years of age and he is now the champion player of a large Illinois club.

Arthur Balfour, past Prime Minister of Great Britain, who is an enthusiastic golf player, took occasion recently in opening a new golf course to controvert the popular delusion that golf is an old man's game, holding that unless you begin young you never enjoy the glory of the game to the full. Mr. Balfour is still under sixty years of age and cannot tell what the ecstacies of golf may be to an old man, but we feel certain that he has still many things to learn about gowf, as the Scots call it.

The story is told by Mr. Balfour that being in France one time and having a few hours to spare, he sallied out to enjoy a turn of the links. He had a French caddie, of course, who had picked up a few English words that he had heard British

golf players use. Balfour made a particularly good put and looked at the caddie for signs of approbation. The caddie's expression of admiration was, "De hell de fluke."

#### Pope-Toledo Warms Up

Herbert H. Lytle, who drove the Pope-Toledo racer in the Vanderbilt Cup trials last fall, went over the Vanderbilt Cup course recently with A. G. Southworth, the New York agent, in one of the new Pope-Toledo touring cars. Lytle found the roads in excellent condition and it was small wonder that the temptation to do a little speeding over the historic course was too strong for him to resist.

The car arrived a Krug's corner and started over the course at 12:30 P. M. At 4:30 o'clock the speedometer showed that 150 miles had been covered. Lytle let the car out going down the Jericho turnpike and a speed of sixty-five miles an hour was easily attained.

After passing through East Norwich and Jericho, he again opened the throttle and sped up the back stretch toward Bull's Head at faster than a mile-a-minute gait. Arriving at the Bull's Head turn, where Lytle made his headquarters prior to last year's cup race, a stop was made, and the plucky little driver was cordially greeted by numerous friends and acquaintances. All wanted to know about this year's Pope-Toledo racer, and there was general rejoicing when Lytle reported that work on the car was well along and that it would soon be ready for a trial spin on the roads outside Toledo.

#### American Mors Record

On the morning of April 1, under the most adverse weather conditions, a regular model 40-52 horse power American Mors touring car made a run from Camden, N. J., to Atlantic City, an exact distance of 58 3-10 miles, in sixty-nine minutes.

This achievement has given added confidence to the engineers and designers who are now at the factory working on the 110 horse power American Mors that will be entered in this year's Vanderbilt Cup elimination race.

A tramp called at a house in New Jersey and asked for something to eat, expressing a willingness to work for the meal. He was shown the wood pile. He soon disappeared and left sticking to the fence a memorandum which read: Tell them that you saw me but that you did not see me saw.

Scenery.-"I've just been West."

"They tell me the scenery in that section is on a gigantic scale."

"It is. I saw whiskey signs twenty-four feet high."-Washington Herald.

#### Honeymooning on the Lehigh

It is not often that you see a railroad man behind the footlights, but in one sense you can see Mr. B. F. Hardesty, of the Lehigh Valley, in that position, for he has been "on the stage" at several of the Keith and Proctor theatres in New York, and the way it happened was this: Mr. Hardesty aided and abetted a very pretty little comedy which was got up by the kinetograph department of the Edison Manufacturing Company for the purpose of taking a moving picture for the theatres. The



NICKEL PLATED TIP ON THE LEHIGH.

picture is called "The Honeymoon at Niagara Falls," and is a film 1,000 feet in length and contains 16,000 separate photographs, and it takes from ten to fifteen minutes to see them all. It is a well conceived and a well executed piece of work, and shows the trouble often taken, simply to entertain.

The scene is on the Lehigh Valley Railroad, and as the Black Diamond Express draws into the station a party of friends are gathered at a railroad station awaiting the arrival of a young couple who have just been married. The carriage containing the bride and groom approaches the station and all



THE HORSESHOE FALL.

rush down the platform to meet it. The party of alleged friends pelt the unhappy couple with rice, paper confetti, old shoes, etc., and away they all go for the Falls.

When the train arrives at Niagara the bride and groom alight; the lady drops an illustrated magazine, which is ceremoniously picked up by the groom, who then turns to the porter to hand that worthy a tip. It so happened (and we were told this on the Q. T.) that the gentleman acting as the groom found

at the critical moment that he had only very small change in his pocket—in fact, a single nickel. The moving-picture machine was taking it all in, so there was no time for explanations and



JUST SIMPLY GRAND.

the party had to keep moving; so the groom abjectly gave the nickel to the porter, caught the bride's arm and they hurried off. The porter paused, speechless, glanced at the coin, and looked after the couple. And here let it be noted that there was no sham and no make-believe to suit the necessities of a picture. The look of utter sadness



MAID OF THE MIST NEARING FALLS.

and disgust on the porter's face was the faithful portrayal of his innermost feelings. Every one felt so sorry for him, and even the kinetograph, which is the heartless machine that takes the pictures, was almost put out of countenance. The net result is that the spectators have a good laugh and the porter is in—well, just five cents.

The newly wedded pair first stop at



OH LOVELY!

Goat Island, from which point they get a magnificent view of the American Falls. Later a trip on the steamboat "Maid of the Mist" appeals to them, and they are seen going aboard.

Reaching the deck, they don rubber coats and hoods. The start is soon made, skirting the base of the Falls, where the spray, thrown high in the air, drenches everybody and everything, the happy couple included. A panoramic view of the Horse Shoe Falls is seen from the Canadian side, and at the base of the Falls appears the "Maid of the Mist," loaded with eager tourists, and of course, the happy couple. A view of the American Falls from the Canadian side is shown, which is just simply grand.



THE AMERICAN FALL.

it includes the bride and groom strolling along the rocky shore and occasionally sitting down to view the rushing torrent. The Cave of the Winds is, of course, entered, the pair being dressed in the regulation rubber suits. A beautiful panoramic view of the whirlpool rapids is also given. Then the return to the railway station, the Lehigh Valley's tamous Black Diamond Express train comes in, and the party are off for New York.

All through this picture the train scenes are good, and the effect of the tumbling water—blue as seen in mass,



CAVE OF THE WINDS, COSTUME.

and foamy white as it pours over, stones and rocks—is marvelously reproduced. Great credit must be given to Mr. E. S. Porter, of the Kinetograph Company, who "engineered" the various scenes and took the pictures, and if you want to get a good idea of what "honeymooning" at the Falls is like, drop in at one of the Keith-Proctor theatres when this picture is running and you will, like many others, be touched by the porter and moved by the motion pictures.

## Information Bureau

swers sent to this department and we invite the sending of questions likely to prove of general interest. We answer by mail questions relating to the merits of various cars or automobile appliances.

#### GARAGE.

R. L., New York, N. Y.: The word "garage" is from the French gare, a station, a depot. Gar is also a common word in the Gothic languages, meaning gear or accoutrements, but in the adoption of the word garage as a station for motor cars the word is undoubtedly from the French.

#### GRAPHITE.

Old Subscriber, New Haven, Conn.: Graphite is one of the very best lubricants. It should be used sparingly in oil, as it is difficult to keep in place. In the case of roller bearings it is best to mix the graphite with grease. Dry graphite should never be used, as it disappears rapidly on account of its lightness. If constantly fed graphite serves as an excellent lubricant, but mixed with good oil or grease it is very durable. Vaseline and graphite is also an excellent lubricant if the tendency to heating is not too great.

#### CONSTANT BUZZING.

M. W. S., Newark, N. J.: Constant buzzing is a sure indication of short circuiting. The coil should buzz only when the spark is required. The cause should be discovered easily and at once, otherwise the batteries are being damaged.

#### RELATIVE WEIGHT OF MOTOR CARS.

J. G., Waycross, Ga.: The relative weight on the front and rear wheels of motor cars can be determined in the same manner as used in determining the relative weight on the driving wheels of locomotives. The front end of the car should be moved on to a platform scale until the centre of the car is in line with the edge of the scale. The proceeding should then be reversed and the rear wheels placed on the scale. The car should then be placed entirely on the scale, and the two weights added may be compared with the complete weight.

#### CENTRE OF GRAVITY.

L. G. M., Paducah, Ky.: A low centre of gravity is undoubtedly the most comfortable for passengers in an automobile. The high centre of gravity recommended in railway construction has the effect of

We are always pleased to publish an- throwing the weight on the top of the rails instead of striking the sides of the rails. This is an important matter in the case of curves. In motor cars constructed for common roads the machinery, of course, must be sufficiently removed from the ground to avoid the possibility of striking protuberances, but the nearer the ground the passengers are the less oscillation they will experience.

#### LOST STARTING . HANDLE.

J. S., Nyack, N. Y.: To start a car without the starting handle is not so difficult as it looks. It is quite easy if the engine has been stopped on the down grade. The clutch should be withdrawn, turn on the current at the switch and put the lever in the highest speed, then retard the spark. The car can then be moved a little and by letting in the clutch gently the engine will start and the lever can be changed to slower. The operation is, of course, safer and surer with two men than one.

#### DIRECT DRIVE.

L. F. L., New York, N. Y .: Direct drive is the ideal application of power, and consists of a single shaft direct from the crank axle to the rear wheels. An equivalent is produced in the use of the sliding gear mechanism by what is known as the direct drive. When the direct drive is applied, the main shaft of the gear change mechanism carries the power direct from the motor to the rear wheels without the intervention of gears on the counter-shaft.

#### CLEANING WITH GASOLENE.

R. McF., Detroit, Mich.: In all cleaning and washing-out about the engine kerosene should be used. It has the double advantage of cleaning metal very thoroughly and also leaves the metal in a condition of being partially lubricated. In using gasolene for cleaning purposes it will be observed that in the rapid evaporation that takes place the metal is left with a seemingly roughened surface, which is very liable to oxidization. If sufficient gasolene is used to leave the surface moist for a considerable time the liability to catch fire is much greater than in the case where kerosene is used.

#### PRESSURE OF AIR.

J. A., Richmond, Va., writes: I frequently see the expression, "pressure of air at sea level." Does the pressure vary at other levels, say at the top of the Blue Ridge? A.—There is a volume of air surrounding the earth which is densest at the lowest level, which is the level of

the ocean. There it is 14.7 pounds to the square inch. Facts about the variation of that pressure can be found in any book on Natural Philosophy.

#### CHAIN.

Novice, Binghamton, N. Y.-I have studied engineering a little and have some knowledge of work lost by friction. In observing my automobile working I am convinced there is considerable lost work in the chain. I have tried all sorts of grease, but the chain does not pass over the sprockets freely. Can you recommend anything to help me out? A .- Use Dixon's Motor Chain Compound. Clean the chain properly, then apply the compound. We use it and know whereof we speak.

#### TOURING ABROAD.

C. O. R., Oklahoma City, Okla., writes: I am contemplating seeing England in an auto touring car. I wish to be informed through your information bureau whether or not it will be best to ship a new machine from this side and sell it there when done with it, or buy one of English make and sell it when the trip is finished? A.-We have consulted with several gentlemen who are in the habit of automobiling in Eurepe, and most of them say that the most satisfactory plan for an American is to take his car along and bring it back when the trip is over. They do not think a second-hand American car would sell well in Britain.

#### MECHANICAL INVENTIONS.

R. A. L., Detroit, Mich., writes: There are several Englishmen in the shop where I work and they claim the origin of every mechanical invention of any consequence for their country. Among other things one of them claims that England built the first steam engine, the first locomotive, the first automobile, the first gas engine and built the first steamer that crossed the Atlantic. What do you say about these claims? A .- Great Britain was the most important manufacturing country at the beginning of last century and naturally produced more useful inventions than any other. The claim that the first gas engine was built in England is not correct. Gottheb Daimler, of Germany, designed the first practical gas engine in 1885. first steamboat to cross the Atlantic was the Savannah, built in New York. The United States inventors certainly deserve the credit of developing marine engines and steamboats.

### EUROPEAN NOTES. NEWS AND COMMENTS

By A. F. Sinclair

THE ROYAL AUTOMOBILE CLUB.

His Majesty King Edward has been pleased to order that the institution hitherto known as "The Automobile Club of Great Britain and Ireland" (no less) shall in future bear the briefer but more noble title of "The Royal Automobile Club," and those of us who have been compelled to write out

the Standard Oil Company would enter upon a war with the Union without making the most strenuous efforts to come to an amicable understanding with the other side. The Union could not be beaten in the ordinary ways of trade. Without having the amount of

the Company's funds behind them the Union could command a good many

AN N. A. G. STREET-WATERING CART USED IN BERLIN.

the old title in full many times for certain publications, in which initials are not esteemed sufficiently explicit, have learned of the change with gladsome rejoicing. But we have not gone the length of the daily and technical weekly papers. To those publications the change presented an opportunity for patriotic gush of which they took full advantage. Even "The Motor World," which, on account of its Scottish origin, might have been expected to take a less exuberant view of the question, came out with a paean of praise of the royal patron and of the club which must have elated King Edward and delighted the club membership. Does the King read "The Motor World"? I don't know. He should. I write for it; but I don't know whether His Majesty sat up all night reading what the papers said about him, but if he did he must have had a good time. Any man who could read all the high folutin of which most of the papers were guilty without cracking his sides must have what is known in this country as "a want," the absence of a sense of humor.

A PETROLEUM ARRANGEMENT.

It may be remembered that there was mention in these notes of the possibility of a war of prices on the part of the Standard Oil Company on the one hand, and a combination of European and Asiatic interests, called the European Petroleum Union, on the other. I do not remember whether I expressed the doubt that was in my mind, but it cer-

millions of pounds sterling, and anything of the nature of a genuine scrap would have meant big losses all round.

Scottish fuel to fall back upon. Gasoline (petrol) of .720 specific gravity costs about thirty cents per gallon on the road at present, and as shale naphtha can be bought for twenty cents there is likely to be a run upon the home fuel, always provided, of course, that the new union of interests do not buy the shale companies out to prevent their competition, and there is also the usual result of increased demand to be faced, to wit, increased prices.

INDUSTRIAL VEHICLES AT OLYMPIA.

The Society of Motor Manufacturers and Traders continue adding laurels to their wreath of fame. The show of industrial vehicles and motor-boats held at Olympia, London, during March, was without question the biggest thing of the kind yet attempted. Even the French critics had to admit that in the construction of business vehicles the German and British sections of the industry, by whom the bulk of the show was provided, were distinctly ahead of France. Most of the exhibitors were firms engaged in the manufacture of pleasure cars, but they have generally got past the stage of merely fitting a van body to a pleasure car chassis. Most



AN N. A. G. STREET-WATERING CART FOR BERLIN. (N. A. G .- Neue Automobil Gesellschaft.) From "Allegemeine Automobil Zeitung."

It comes as no surprise then to of the vehicles had chassis specially delearn that there is to be no war, and we may make up our minds to pay for our fuel any price that the new combination of interests cares to exact. But there are consolations to such of us as reside near the Scottish shale fields. It was stated the other day that there is at present enough shale in Scotland to supply the present demand, which amounts to between sixty and seventy millions of gallons of oil per annum, for 700 years, so that the present generation need not worry. If we can use .740 specific gravtainly did not appear to me likely that ity oil spirit we will always have the

signed for load carrying, and engines for driving such machines at slower speeds than those reached by pleasure cars. But there was found a difficulty in determining exactly what was meant by an industrial vehicle, and in the case of cars for doctors' use, for instance, their right to be present in such a show was called in question. A great variety of machines was shown such as heavy steam wagons to carry up to six tons, delivery vans driven by paraffin petrol, and electricity, hansom cabs, road rollers, lorries petrol and steam, lawn mowers, omnibuses driven by steam, petrol and petrol-electric motors, chara-banes, top-wagons, commercial travellers' cars with suitable shelves, a horse-box for carrying horses by road, ambulance vans petrol and electric, a furniture van, a newspaper delivery van, a sample carrier for town use, a tank wagon for street watering, etc.

It is gratifying to hear that although the attendance was not very oppressive, it was of the right sort of people, and a lot of business was done. There were a great many enquiries from which business will no doubt result hereafter. Of exhibitors there were nearly three hundred, but of these less than a hundred showed vehicles, the bulk of the latter being British, with Germany a good second.

STOP, LOOK AND LISTEN is an excellent motto for automobilists to observe when approaching railroad crossings, but many of the people running automobiles are so reckless that they defy even railroad trains and get the worst of it. Here is a dispatch from Savannah, Ga., which is representative of other news items going forth daily: Ten tourists were injured this afternoon when a touring auto was run down by a Central of Georgia train at the railway crossing on Bay street. The automobile was returning from Hermitage, a few miles from Savannah. Among those injured were Mrs. Mary Rourke of Brooklyn, N. Y., aged 50 years, scalp torn off and leg badly crushed, necessitating amputation. She will die. Mrs. Eliza Hitchcock of Burton, Ohio, aged 88 years, had severe scalp wounds and arm crushed. She will die.

An unfair feature about these accidents is that the driver generally escapes without injury.

#### Uninvited Guests

A party of uninvited guests who went with pretentious announcements to inspect the Panama Canal received scanty welcome, and they are inclined to work up a new grievance to air in Congress. The average rustic congressman considers himself competent to give advice on any subject he knows nothing about. That was evidently the moving power that started Speaker Cannon and a tail of pumpkin jokes to visit Panama for the purpose of giving expert advice to the public on what the canal diggers are doing. Engineering operations are the last works that ignorance ought to interfere with, but fools fly in where angels fear to tread and the Cannon party went to Panama.

The party evidently expected that everybody on the Isthmus would drop their business to do the Congressmen honor, but instead of that they were entirely ignored and there was considerable heat about that did not belong to the climate. They were rightly served.

#### Montreal Automobile Show

The second annual automobile and sportsmen show held under the auspices of the Automobile Club of Canada was held in the Arena, Montreal, during the second week in April. An annex building had to be added to accommodate all of the entries, and it was ultimately found that the increased facilities were still unequal to the occasion. The color scheme in the way of decoration was in green and white and the result was finely artistic and particularly pleasing. The committee had the fine sense to limit the hours of admission to the general public from two to six in the afternoon and from eight to ten-thirty in the evening. As a result the exhibits continued to appear at their best during the entire exhibition. Motor cars of every description were there from the baby runabout to the monster touring car. Motor boats and their accessories were very much in evidence, and the leading railroads had special exhibits of elk hunting and other forest scenes, which attracted much attention both from their novelty as well as the particularly artistic and natural reproduction of the scenes de-

The crowd of spectators was very great. The students of some of the educational institutions attended in a body and seemed to enjoy the exhibition very greatly. Many members of the Canadian Parliament were present, and among other notables Helen Terry, the English actress, seemed to enjoy the show greatly. Much sympathy was expressed towards Manager Jaffray, who, while showing the workings of a new transmission gearing, had his right hand severely lacerated.

The success of the exhibition was in every way beyond the expectation of the promoters, and the result will undoubtedly be a rapid increase in popular favor of the automobile as well as a growing desire to see the beauties of the Canadian forests and lakes as so beautifully illustrated by the Intercolonial and other railways. The influx of visitors from the United States during the summer months will doubtless be greatly enhanced by the exhibition.

#### Had to Swallow His Own Medicine

There are certain places in the country which automobilists approach with misgivings, although they are willing and anxious to obey the law. The misgivings arise from local restrictions as to speed which no stranger can understand.

One of these trap places is Tarrytown, N. Y., a small town on the east bank of the Hudson River, a place situated on the principal highway between New York and Albany. Although this town obtains considerable nutriment from the automobile business, a large manufacturing establishment being located there, the human vermin controlling the town council do all in

their power to embarrass automobilists to have ordinances in force requiring speed to be reduced to six miles an hour. Among those active in making oppressive rules for automobilists is a Dutchman named Dinkel.

In spite of his hatred to others running automobiles, Dinkel himself seized with the motoring fever last month and bought a second-hand machine in Brooklyn and started to take it home on its own wheels, a crony named Foley driving. passing through Fifth avenue, New York, the pair were arrested for exceeding the legal speed limit and fined. Then it transpired that Dinkel had no license to operate the car, and another excuse for a fine was entered on the book. Finally Herr Dinkel was obliged to deposit a gold watch and jewelry to bail out his pilot, Foley. Thus we see how the tyrant sometimes gets his just deserts. Perhaps when the next six-mile-an-hour ordinance is proposed Dinkel will vote against it.

#### Lost Time

Chuggerton—"How's your new chauf-feur?"

Carr—"Had to fire him—he used to be a motorman."

Chuggerton-"Too reckless, eh?"

Carr—"Reckless, nothing! Why, I couldn't break him of the habit of slowing up at crossings."—The Index.

Attesting the great popularity of the Autocar throughout the country were the great number of letters received by Mr. Fred P. Brand, General Sales Manager of the Company, who some time ago thought a booklet of testimonial letters would be a matter of interest to automobilists in general. In response to a request sent out by Mr. Brand to Autocar dealers all over the country, over five hundred of these letters were sent, completely swamping him, and entirely upsetting his plans for his booklet, as it would have been impossible to embody all of these letters, or even to give a fair representation to the number received.

The writers were unanimous in their praise of the Autocar, a majority by a curious coincidence dubbing the Autocar as the "Car that takes you there, and brings you back."

Manager Robbins, of the Aerocar Company of New York, reports the following sales: W. S. Emery, New York City, Model F; C. W. Hoblitt, Washington, Model F; F. C. Campbell, Yonkers, N. Y., Model C; James C. Davy, New York City, Model D; and William F. Wrock, New York City, Model D.

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#### A PRACTICAL JOURNAL OF AUTOMOBILING AND ENGINEERING

THE AUTOMOBILE PRESS

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#### To Invite Adverse Legislation

A good many influential automobilists are urging our makers to engage more in the production of excessively high speed motor cars, on the theory that the putting of such cars upon the market is the only way to prove that Americans are capable of building cars that can compete successfully with anything built in any country. Recognition of the merit of American built automobiles has grown so steadily in the last two years that we do not think the artificial argument of producing cars capable of violating the road laws of every State of the Union would be productive of good results. It would not be a wise policy to defy the growing public sentiment against excessive speed on the country's highways. There is a tendency among the least rabid legislators to establish laws that would prohibit vehicles from the use of the highways that are capable of exceeding a very moderate speed. Measures have been introduced into several legislatures this season to make it compulsory that automobiles should be geared down so that they would be incapable of running faster than twenty-five miles an hour. The way to change these vague intentions of legislators into actual laws is to make the high speed tendencies more conspicuous than they are now.

#### The Horseless Age

The horseless age will be long in coming, according to the latest statistics. In spite of the great and growing use of the automobile and electric tramways which happily relieve the horse of much of the painful drudgery which has been the lot of the noble animal for years, there is now a greater demand than ever for good horses and last year the record prices were reached for horses of good quality. The ranchman's association reports that the general increase in prices ranged from 10 to 15 per cent. It would seem as if the demand for horses more than keeps pace with the average record of the last century. In the open country where the roads are few and the condition of the roads not what they might be, the horse will always be a prime favorite and the introduction of the motor car instead of bringing in the horseless age will in all likelihood have the effect of bringing in a better class of horses whose lives will in many ways be less burdened with toil than the horses of bygone generations.

#### Vanderbilt Race Talk

The subject of another Vanderbilt Cup Race is of widespread interest not only throughout the United States but across the Atlantic.

The season of the year has been more or less discussed but we are inclined to the opinion that October furnishes the best environment and weather conditions to run this contest and we know of no better place in America than the new automobile highway on Long Island, provided that it is completed in season, otherwise any course similar to the one already used on Long Island which would cover a distance of approximately three hundred miles seems most advisable. Long Island is particularly well located and its topography well suited to the general conditions required in a fair automobile contest of this kind.

We are strong believers in the policy of having American machines driven by American born citizens and we would like to see the next Vanderbilt Cup Race run under/approximately these conditions with the addition of such other details in arrangements as are found necessary to the proper regulation and safeguarding of the contest.

#### Fallacy About Boiler Explosions

An experienced engineer telling to a newspaper reporter notes of narrow escapes from being present at boiler explosions, told of finding a man trying to pump water into a red hot boiler which the engineer concluded would have resulted in a disastrous explosion had the cold water reached the hot plates. We would have excused that

man if he had not emphasized the claim that he is an engineer of training and experience.

There is a prevalent belief among people, who ought to know better, that should a steam boiler get hot through shortness of water, and feed water be suddenly injected upon the hot plates, an explosion is almost certain to follow. The fallacy of this has been repeatedly demonstrated by experiment in the United States, and several years ago the Manchester Steamusers' Association instituted a series of tests to ascertain the effect upon an overheated boiler of the entrance of cold water, which ought to be widely known. Three tests were made, the boiler plates in each case being heated nearly to redness. Water was then introduced. In one case the steam pressure rose within a minute from six to 27 pounds, but in the other tests the cold water did not result in increasing the pressure at all. The effect of the sudden change of temperature was to distort the plates and tubes, but no indications of an explosive tendency were found.

In connection with these tests, some experiments described by Mr. Coleman Sellers long ago at a meeting of the Railway Master Mechanics' Association will be of interest, for boilers are liable to act to-day as they did then. He said: A locomotive, which was condemned and had been condemned to be taken to pieces, was run out on a side track off from Altoona, in the woods, and they determined to try an experiment which they had always desired to see tried, namely, the firing of a boiler until the steam was very high, then blowing it out so as to expose the top of the crown sheet, and allow it to become red hot, and with a large fire engine force water into that engine. They fired it up and retired to a safe distance. They saw the pressure gauge go up to 125 pounds; then the lock-up safety valve blew off, showing it was not weighted heavily enough. They had no means to determine, except by guess, and retired a second time, thinking they could then go on with the experiment as they intended, but they had hardly gone from the boiler-they were not five minutes away from the boiler when the pressure gauge hand seemed to run as rapidly as anything could 'until it reached something near 200 pounds, when the engine blew to atoms. It was full of water, with every condition that would insure safety, except that the pressure was a great deal too great for the strength of the material composing No other reason could be given for the explosion.

They then took a second engine and treated it in the same manner, but that one happened to be strong enough to sustain the pressure they desired. They blew the water out, and when the glass gauge indicated that it was below the crown sheet to be red hot they pumped water into it and in pumping in it behaved as I had seen it do in other cases. The steam merely went down. Once or twice or three times they repeated it. The boiler was injured by the fire, but it did not explode or do any harm to inject large quantities of cold water into the very much heated boiler.

In other experiments made at the Harrison Boiler Works with cast iron boilers, many gentlemen present, representing a Committee of the Franklin Institute, were anxious to see this experiment of a red hot boiler having water suddenly injected into it tried with a cast iron boiler. They had already fired one of them up to a pressure of 170 pounds. One of these same boilers was fired up to 150 pounds, the blow-off cock was opened, and the whole of the steam discharged. We waited ten minutes, and heated the furnace so that a stick of wood put against the boiler would immediately become ignited, and we injected the water in. But, instead of making steam, it cooled off the boiler. We waited for steam, blew it off again, and three times we repeated that experiment, and during that whole time I was standing within five feet of that boiler, with by hand on it most of the time, and it behaved just exactly as a mass of iron of that size should behave; that is, the water passed into it, merely cooling off the iron and doing nothing else. The experiment was very interesting and was very conclusive that the whole mass of the boiler, if heated red hot, does not contain heat enough to raise the water in the boiler up to the steam point.

#### The Glidden Tour

The Automobile Association of America and the National Association of Automobile Manufacturers have through their committees agreed on the route and rules regulating the Glidden tour this year. The route will probably be through Indiana, Ohio, Michigan, Illinois and Pennsylvania. The starting point as at present agreed will be at Cleveland, going to Chicago by way of Detroit. The return to New York would be through Indiana and Pennsylvania. The distance traversed by this route would be nearly 1,600 miles. This is over 500 miles longer than the route of last year.

The details are now in course of arrangement and until the hotel and other necessary particulars are completed the final announcement of the exact line of route will not be made.

The Glidden trophy was twice won by Mr. Percy D. Pierce in the Pierce Arrow.

The Buffalo automobilists will make an effort to retain the trophy for the third time, but many of the best cars are already entered for the contest.

#### Judging and Knowing Speed

There has been more or less discussion from time to time as to the ability of the locomotive engineer to judge speed, and it is pretty generally admitted that the steam locomotive engineer has done well in the matter of judging the speed he may be traveling, at any particular moment. When it comes to the judging of speed the man in charge of an electric locomotive has not exactly the same chance to form an estimate of speed. In the electric locomotive there are no exhaust beats, and there are in this country at least no outside rods or moving parts to look at, and there are many things absent on an electrically driven machine, which are noticed in connection with a steam locomotive and which help the steam locomotive man to tell about how fast he is going.

In the Simplon tunnel there are definite spaces measured off and set with appropriate mechanism, with which the passing locomotive makes electric contact, and, so to speak, registers its own performance. On the Continent the practice is to have some sort of speed recording device on most of the steam locomotives hauling important passenger trains. The application of a speed recording and speed indicating device to electric locomotives ought to be part of their regular equipment.

In this matter the Chicago, Burlington & Quincy have shown a determination to have reliable information in regard to actual speed. This road has now over a hundreds speed recorders in use on their locomotives hauling passenger and mail trains. They use the Boyer Speed Recorder, made by the Chicago Pneumatic Tool Company.

These recorders are applied to the engines over the front truck and are belted to an axle pulley on the outer end of the front truck axle. By means of a fine tension wire, the movement of the recorder is transmitted to a speed gauge in the cab. This gauge is placed in front of the engineer so that he can see at a glance just what speed in miles per hour he is making. In addition to thus indicating in the cab the rate of speed of the locomotive, a permanent record is made on a paper tape in the speed machine. This tape is removed at the end of each round trip for future reference.

With this apparatus on the engine there is no excuse for exceeding any prescribed limit of speed and the indicator has been found very convenient for engineers when given a slow order for any portion of the road.

## Horrible Condition of New York Streets

The streets of New York City are probably the worst to be found in any great city in the world. Automobilists have long complained to the constituted authorities for relief, but in vain. Now the Automobile Club of America has taken the matter up and proposes spending money to have necessary repairs made.

A Special Committee on City Streets has been appointed, of which W. M. Miles is chairman, with Colgate Hoyt and A. R. Shattuck as associates. The following is part of a circular this committee has issued:

It is proposed to fight not only against the wretched condition of the pavements. but also against dirty streets, the illegal use of the streets for storing building materials, the encroachments upon the streets by all who improperly use them, such as those who store vehicles thereon, pushcart men, etc., and against the illegal opening of the streets by gas companies, electric companies, builders and plumbers. The Club proposes to go to the root of the matter, and if it shall appear that present conditions are the result of an improper system under the City charter, to seek to have that system improved by proper charter amendments. trouble arises from incompetence or indifference on the part of officials, then to proceed against those officials by appeal to the Mayor or Governor of the State as may be necessary or even to the Grand Jury by way of indictment, if it shall appear best, in order to bring about a permanent improvement.

#### Orphans' Day

What promises to become a feature of American life is the scheme happily begun to give the orphans in public institutions a day's outing in automobiles. To this end several very successful excursions have been given in New York City, and now Chicago has wisely taken up the plan, and June 12 has been suggested as a national day for treating the orphans to a day of delight in the motor car. If the rich will lend their cars and the golden sunshine pour its unclouded glory on the earth, the joy of the children will be something good to look at. Holidays that are holidays are always delightful. Holidays that shorten a poor man's wages and bolster up the waning coffers of an overwatered stock company are not holidays at all. If all the groans that are issued in trying to make ends meet on account of some of the compulsory holidays were crystallized into a cry of protest the sound might reach some of our legislative assemblies, but the groans are the inaudible murmur of the voiceless multitude.

By all means let us have an orphans' day, but do not make a mockery of it by

stopping the wheels of industry and throw working men out of employment. If we can sweeten the lives of these orphans we do a noble work, and it would be difficult to conceive of a brighter or better method of treating children to a day's happiness than by passing through the panorama of city or country on a delightful summer's day in the automobile, and stopping perhaps at some resort for a time where the innocent pleasures suitable for children can be fully enjoyed. To the young especially, and to some who are not so young, such a day is a day to be remembered.

#### Improved Business

Nothing so effectually improves business in the automobile world as the arrival of Spring. When she comes scattering flowers over the smiling earth and spreading her green mantle over hill and valley the song of the automobile may be heard in the land. The gilded show-rooms begin to take on an air of activity and those who have not made purchases already are thronging the salesrooms of the various manufacturers, and it is no idle boast in many instances to state that some of the leading makers have already sold their entire output and are taking orders for next year's models only.

The light runabouts, as might be expected, are in very great demand. People of moderate means find that they are not only much more convenient and elegant than any kind of carriage ever devised to be drawn by horses, but in the end they are much cheaper. It is also a recognized fact that the bent of the American mind is, generally speaking, more towards mechanical engineering than it is to the care and management of horses, and that the average business man speedily masters the details of automobile construction and becomes a chauffeur, duly qualified, in an incredibly short space of time.

#### The Recent Maxwell Comparative Fuel Test from Trenton to Atlantic City, N. J.

As a logical sequence to the fuel run from New York to Boston, made by three Maxwell touring cars last January, three cars of similar model made the trip from Trenton to Atlantic City, N. J., on alcohol, kerosene and gasolene on April 6. The success which attended the event, together with the fact that results were guaranteed authetic from the standing of the official observers, made it as significant an event as the previous one, which excited more discussion than any automobile run in recent months.

A unique feature of the run and one that well attended its importance was the entrusting to J. D. Maxwell of a message of greeting by Fred W. Gnichtel, Mayor of Trenton, for delivery to Franklin L. Stoy, Mayor of Atlantic City, on the arrival of the party at their destination.

At 10.25 a. m. the start was made, the three cars heading for Philadelphia by way of the Jersey route. The alcohol driven car, with H. A. Grant, of Tarrytown, N. Y., at the wheel, took the lead; this position was consistently maintained without difficulty throughout the trip. Closely following it was the combination car, driven on a mixture of gasolene and kerosene by Charles Fleming, and the third car, on gasolene, driven by Harry Caywood. The two drivers first mentioned acted in a similar capacity on the previous run, each being an expert on the use of alcohol and kerosene in internal combustion motors.

The run from Trenton to Philadelphia was without incident other than the excellent time made, the party arriving in the latter city shortly after noon. J. D.

On weighing in the three cars on arrival at Atlantic City, with passengers and baggage as carried, the alcohol car showed 2,560 pounds, the kerosene 2,470 and the gasolene 2,250. As to fuel consumption on emptying the tanks, the alcohol car used 14½ gallons, the combination kerosene and gasolene car used 3 gallons of the former and 5 of the latter, while the car on gasolene alone used 7½ gallons. The distance covered was 103½ miles.

The record of the combination car was of especial interest in that it demonstrated beyond question of doubt the effectiveness of such a road mixture. The car was arranged with two fuel tanks, one for each hydrocarbon, and two carbureters as well, so arranged as to form an explosive mixture in the proportion of about 3 to 5.



THREE CARS AT THE START, TRENTON, N. J.

Maxwell, in a four-cylinder Maxwell touring car, accompanied the fuel test cars for a short distance, afterwards returning to Tarrytown, N. Y. After a stop in Philadelphia, for lunch and refilling the fuel tanks, the cars swung into the White Horse Road en route for Atlantic City. Though driving into the face of the cold wind, the sixty miles straight away to the sea was made in excellent time, reaching the destination at 6 p. m.

The only serious delay encountered in the run was due to an altercation which the driver of the gasolene car had with a rural constable at Magnolia over an alleged infraction of the speed laws of New Jersey. The matter was adjusted, however, after some arguing.

Two observers were carried in each car, namely, Stanley Y. Beach, of the Scientific American, and H. De G. Robinson, representing the A. C.; W. E. Tisne, James H. Collins, S. X. Champo, and John P. Slack, of New York.

In addition to the efficiency shown, the use of such a mixture possesses two additional advantages, one that of deodorizing to a degree the kerosene, and the other, that of decreasing the fuel cost as over gasolene alone.

At a meeting of the Membership Committee of the Automobile Club of Buffalo, held recently, at which H. C. Wilcox, C. B. Penny and Dai H. Lewis were present, twelve applications for membership were favorably received, as follows:

Henry J. Trautman, F. Hossenlopp, N. Allen Gardner, William Hamlin, C. H. McCullough, Jr., Dr. Elmer E. Starr, Dr. C. E. Rose, Samuel J. Dark, Harry N. Kraft, E. E. Ferree and William F. Ehmann, all of Buffalo, and Philip S. Flinn, of Pittsburg.

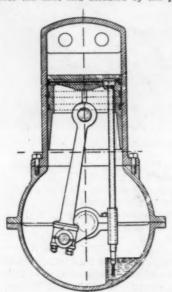
There were sixteen applications in all, four of which, however, were laid on the table for further investigation.

## Patent Office Department

The patent office reports show a striking number of inventions in relation to vehicle rims and it would seem that many of our inventors are determined to effect further improvements in tires. It is to be regretted that the delay in the patent office is of such a lamentable kind that the inventions that may be perfected at the present time may take more than a year before coming into public notice through the medium of the patent reports. As an illustration of this unjust and unnecessary delay it may be noted that the invention selected for our first notice was filed on November 29, 1905, and the report from which we have made an abstract was published by the patent office on March 19, 1907, showing that nearly sixteen months had elapsed in the course of examining the features of the inven-

#### Lubricator

A positive feed lubricator has been patented by Mr. J. H. Wesson, Springfield, Mass., No. 846,967. The device comprises a pump carried by the piston head and having an inlet, a piston for sweeping across the inlet and actuated by the pis-

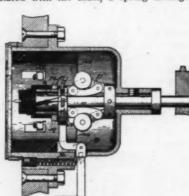


ton head, a valve between the inlet and the piston head whereby when the pump is carried into a reservoir of oil a definite amount of oil is forced by the piston to the piston head. The crank casing is adapted to contain the lubricant by having a shoulder forming a cavity near its lower edge.

#### Igniter

A spark timing device for igniting systems has been patented by Mr. V. G.

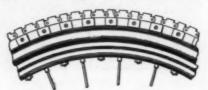
Apple, Dayton, O. The contrivance embraces a driven shaft with circuit controlling devices within the casing, including a rotating conductor, a governor associated with the shaft, a spring arranged



to resist the action of the governor, and means disposed for adjusting the tension of the spring to vary the resistance of the action of the governor.

#### Tire

Mr. J. M. Sheppard, Findlay, Ohio, has patented a wheel tire, No. 847,442. The device embraces a combination with a yielding tire body having an outer side provided with spaced sockets of a tread

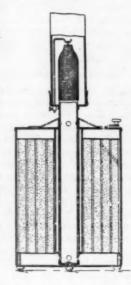


member having spaced ears located in the sockets and bolts passing transversely through the outer side of the body and through the ears. The tread member comprises a series of links, each link consisting of a cross-bar having oppositely extending ears that terminate short of the outer side of the cross-bar, the ears of one link being pivotally interlocked with the ears of the next link, providing an anti-slipping surface on the tire, with means to hold the links in place and secure the sections of the wall together.

#### Carbureter

A carbureter has been patented by Mr. G. H. Holgate, Philadelphia, Pa., No. 846,852. It comprises a casing and cover with enclosed absorbent material, a tube closed at the lower end and open at the upper end, means for holding the tube stationary, a tube open at each end revoluble on the stationary tube, means

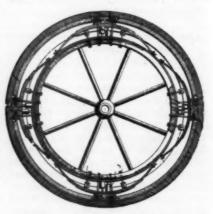
for imparting a partial revolution thereto, an air space between the two and an inwardly turned flange at the bottom of of the tube with openings in the cover adapted to be opened or closed by the



revolution of the movable tube, the openings of the outer and inner tube being arranged in different register and adapted to open and close alternately.

#### Spring Wheel

Mr. J. H. Hawkes, Detroit, Mich., has patented a spring wheel for vehicles, No. 847,926. The wheel is provided with a concave rim having inwardly flanged edges, a tire having outwardly flanged



edges for engaging the edges of the rim, an inner metallic tire comprising a plurality of sections spaced apart, bearing plates on the ends of the sections, bearing blocks between the sections having recesses for receiving the bearing-plates, and springs arranged between the bearing blocks and the rim.

#### Automobile Baggage Trucks

There have been placed in use in the Broad Street station of the Pennsylvania Railroad in Philadelphia, baggage and mail trucks which are in themselves miniature automobiles. Those in use now are, in a sense, experimental, but the satisfac-

Four of these trucks are now in use, three built by the Pennsylvania Railroad and one by an outside concern.

#### New Brooklyn Route

Through the efforts of the Long Island Automobile Club a more direct route has



BAGGAGE TRUCK CARRYING MAIL. THE ATTENDANT ONLY HAS TO START, STOP AND STEER, THE MOTOR PROPELS.

tion which they have given points clearly to the fact that they will ultimately take the place of the old hand-pulled trucks in the larger stations.

It often happens that a passenger does not deliver his trunk in the baggage room until five minutes or less before train time. It is not an uncommon thing to see several baggage porters pushing and tugging at one ordinary heavily loaded hand truck in their effort to deliver its burden within the allotted time. To-day one may be attracted by a heavily loaded truck running along at a good speed and guided by a man who holds the tongue and starts it simply by pushing a button.

The general appearance of the trucks is similar to that of the old hand-pulled ones, but beneath the platform are boxes containing a storage battery and one electric motor.

It is important that these trucks must neither run away nor get beyond control if accidentally left standing. In this respect they have proved satisfactory. Their speed is controlled from a small lever fastened on the tongue by which they are steered, and it is further arranged so that if this tongue is dropped or let down the current is shut off and the brakes are put on. A catch is also provided, so that the tongue can be fastened up against the front of the truck, in which position the current is also shut off and the brakes are held on the same as when it is on the ground.

the club at the corner of Degraw street and Fourth avenue. Twelve sign boards in all will be erected, each two feet long by one foot wide, and they will be plainly marked on both sides. The route will be from the Brooklyn Bridge Plaza up Liberty street, across Fulton, passing under the elevated railroad into Clinton street, then to Pacific street, turning left into Fourth avenue, and then turning left into Degraw street, which leads up to the Prospect Park Plaza. Work will begin this week in placing the sign boards under the auspices of the Runs and Tours Committee of the club.

#### Automobile Insurance in Germany

The insurance companies in Germany give the members of automobile and motor cycle organizations special rates for the insurance of their automobiles and insurance against accidents. The reduction in rates is sufficiently important to make hundreds of people interested to join automobile clubs and associations. The rates are based upon the size and horsepower of the automobile. For instance an eight horsepower car is insured for an indemnity of \$9,520 for injury to a single person, \$19,040 for two or more persons, together with an indemnity of \$2,380 for property insured, at an annual cost of \$16.18.



AUTOMOBILE BAGGAGE TRUCK USED ON THE PENNSYLVANIA RAILROAD.

been selected for motorists to use in going from Brooklyn Bridge to Prospect Park. Permission has been secured from the telephone and telegraph companies to use their poles for the placing of large signs marking the roads to be followed at the turns. One pole will be erected by Col. William C. Greene of the Greene Consolidated Copper Company, purchased an armored automobile for use in traveling about his mine and lumber properties, some of which lie in the country infested by hostile Indians. A Gatling gun is mounted in front.

#### An Expert on Value of Graphite

There are many honestly doubting Thomases who have not yet been brought to see the exceptional lubricating advantages of flake graphite in motor cars. For the benefit of these we wish to put on record the expert testimony of Mr. Chas. E. Duryea, maker of the Duryea car, and acknowledged as one of the foremost gas engineers in the country. A man of broad knowledge and wide exeprience—one who speaks with authority.

In his "Directions for Operating Duryea Vehicles" the following occurs:

"A little oil and graphite applied to the compensating gear and chain occasionally are destrapse.

"It will be understood that any mechanical parts having motion should be lubricated either with oil or graphite."

"A little dry graphite on this (the chain), the gear teeth, the high clutch surfaces and the shaft end bearing each day is good practice.

"Use no oil on the exhaust valve, sparker stem or inlet valves, for heat-will bake the oil and clog the parts. Gasolene will clean the inlet valves and prevent their sticking, while graphite lubricates the other parts."

These frequent references taken from different parts of the Duryea Instruction Book clearly indicate the confidence that Mr. Duryea places in graphite lubrication. And be sure that this confidence is only the result of practical experience with graphite, for Mr. Duryea could not afford to risk his reputation by supporting that which had not demonstrated beyond question or doubt its value and practicability.

#### Stearns Car to Enter

The decision of the directors of the American Automobile Association to hold a long-distance race over the Vanderbilt Cup race course this fall in which only stock touring cars of American make will be permitted to enter is meeting with the hearty approval of manufacturers throughout the country.

"I heartily indorse a fair contest over an approved course between cars not built as racers," said E. S. Partridge, of Wyckoff, Church & Partridge, to-day. "Eventually such contests will be the most popular and practical forms of autobile racing. The general buying public is more interested in the actual accomplishments of real stock cars than in the results of races where no expense or effort is spared to build a special racer bearing no resemblance whatever to the regular cars made by the firm which enters the contest.

"We propose to enter the Stearns car in all legitimate contests and we will surely be represented in the proposed stock touring car races to be held under the auspices of the A. A. A. The disregarding of horsepower and the rating

of cars according to their cylinder contents, as proposed under the new rules, is a change which will be welcomed by all true lovers of a fair race."

#### Percy Owen Interested

No one is more keenly interested in the possible changes in the rules governing the Vanderbilt Cup race than is Percy Owen, American agent for the Bianchi cars. Three cars of this well-known Italian make are to compete in the Kaiser's Cup contest in Germany, and if the rules of the Vanderbilt race are changed so that the cars built for the German contest are eligible, at least one Bianchi car will represent Italy in the The Bianchi great American classic. race drivers are Tomasilli, who competed in a six-day bicycle race in New York several years ago, and Nazaretti. Percy Owen has recently sold a 70-90-horsepower Bianchi to Louis J. Young and a 4c-50-horsepower model to G. C. St. John.

#### Preparing for Scarcity of Rubber

Many of the ablest chemists in the world are working hard and expending much money on trying to make rubber by a synthesis process, that is constructing the material from the elements present in the natural substance. These people have produced a great many substances by synthesis, artificial silk being among them, but rubber is a very elusive substance to imitate, but labor and perseverance will no doubt triumph in the end.

Our Agricultural Department under the encouragement of Secretary Wilson is keenly alive to the importance of producing more rubber, but the principal part of their attention is devoted to advocating the planting of rubber plants in those parts of our territories suitable for the growth of rubber trees.

The world's market for rubber is constantly increasing. One reason for this is the great demand by the manufacturers of motor vehicles. Though indigenous to certain regions in South America and West Africa, yet the tree will grow in other lands, and thousands of seedlings have been planted in marshy ground in the Seychelles Islands. Attempts are also being made to raise it in Ceylon and in Dutch Borneo.

The demand for rubber plants, especially for Dutch territory, is so great, says the London News, that Malays raid plantations at Singapore and ship the plants to Dutch Borneo. Upward of 10,000 seedlings have been stolen from one planter in Malacca, while seedlings have been exported from Singapore at the rate of 30,000 a week. In fact, the world has now reached a point in the rubber industry when—like coffee—the tree must be cultivated systematically.

At present the methods of collection are primitive in the extreme. India-rubber

is, of course, the coagulated sap of certain trees, and the common practice is to make incisions in the stem and place clay bowls beneath to catch the sap as it flows. Four ounces daily is said to be a good yield for a tree, but the season lasts about six months only.

It was no doubt the discovery by Charles Mackintosh, a Scotch chemist, of using rubber to make waterproof clothing that led to the use of the material on a large commercial scale about 1820. Since then the consumption has enormously increased.

#### E. R. Thomas Approves

"I heartily approve a long distance endurance race for American cars," says E. R. Thomas, "but protest against any restrictions in motors, clutches, transmissions, bearings or any other one feature, except chassis weight, approximating the weight of standard touring cars, for the reason that such would tend to promote light, unsafe racing freaks. The factors of safety, size and durability are too important to be omitted, and a car must be judged as a whole and not by any feature.

"I believe there should be no limit in great races, except weight, so as to permit each engineer to attain his objects—race perfection and car reliability—in any wav he sees fit. Great contests of speed, and other feature contests, such as those for motor displacements, carbureters and tires must necessarily be minor ones."

#### Automobiles as Bail

Charles T. Terry and officials of the Automobile Association of America attacked the bill of Senator McManus affecting the offering of motor cars as bail at a hearing before the senate committee on internal affairs at Albany. The law provides that an owner may offer a machine as bail in case he is arrested, and Senator McManus' bill would extend the same right to chauffeurs.

Mr. Terry said there was serious objection to the amendment and that it was virtually a seizure of property.

"In nearly every offence in New York, such as reckless driving, for which the drivers of motor cars are arrested, the guilty party is the chauffeur who is using the machine without permission," he said. "We hold this to be grand larceny. There is no justice in permitting a chauffeur to offer as bail the machine of his owner, which may have been taken without permission."

He declared that it was a violation of the constitution in that it permitted the seizure of property without due process of law.

The Traymore Hotel, Atlantic City, N. J., have purchased a handsome electric omnibus of the Auto Car Equipment Co., of Buffalo, N. Y.

## Of Personal Interest

Mayor S. P. Stoy, of Atlantic City, N. J., has purchased a 40-horsepower Deere runabout.



MONSIEUR GUSTAVE CHEDRU,
Who is the head of the designing staff of the
E. R. Thomas Motor Co.

Ex-Governor Odell is a recent purchaser of a 40-horsepower Winton, Model M.

Mr. W. T. Helfer has been appointed general manager of the Springfield Metal Body Company.



MR. HOWARD E. COFFIN,
Who is vice-president and chief engineer of the
E. R. Thomas Detroit Company, and is
also consulting engineer of the
E. R. Thomas Motor Co.

Mr. W. L. L. Peltz, of Albany, has now two machines, a 40-horsepower Thomas and a Locomobile.

Former Mayor Frederick W. Wurster, of Brooklyn, is one of the latest buyers of a Welch touring car.

Mr. Alec Holroyd has been elected vice-president of the Midgley Manufacturing Company, of Columbus, Ohio.

Mr. Robert J. Schmunk has been appointed manager of the Rees Company, 42 West Sixty-second street, New York City.

Mr. Walter Lumley, of Albany, N. Y., is again out in his 50-horsepower Thomas car, which made many unusual runs last season.

Mr. C. T. Welch, formerly in the automobile business in St. Louis, has joined the forces of C. A. Coey & Co., of Chicago, Ill.



MR. E. R. THOMAS,

President of the E. R. Thomas Motor Company, of Buffalo, N. Y.

Mr. Thomas has become one of the foremost men in the automobile indunstry, due entirely to the high merits of his car, which has furnished a model for other American manufacturers. His is the master mind of the Thomas.

Mr. William E. Iselin is the latest motoring enthusiast to have his machine equipped with Truffault-Hartford shock absorbers.

Mr. W. E. D. Stokes recently purchased a 50-horsepower Pope-Toledo touring car and intends to take it to Europe with him this summer.

Mr. Harry G. Sommers, of the Knickerbocker Theatre, has taken delivery of a 40-horsepower Deere touring car. Harry says the car is certainly a "dear."

Mr. Fillimore Drake, who has been connected with the B. F. Goodrich Com-

pany, has joined the force of the G. & J. Tire Company, as traveling salesman,

Mr. L. A. Harris has joined the force



MONSIEUR MICHAEL AMIDE LONGERON, Who is at the head of the French forces of the E. R. Thomas Company.

of the R. E. Hardy Company, New York. He is covering territory with Hardy's Sta-rite plugs and ignition apparatus.

Miss Anna M. Andrews has been appointed chairman of the committee which will arrange the floral parade of the Chicago Women's Motor Club, to be held in May.



MR. H. J. HAAS,

Who is general superintendent of the Engineering Department of the E. R. Thomas Company.

Mr. A. J. H. Edwards has been appointed manager of the Electric Vehicle Company's New York branch, to fill the vacancy caused by the resignation of W. W. Burke.

Mr. E. G. Mooney, formerly connected with the Central Automobile Company, who has been spending the winter in Florida with his family, returned to Pittsburg last month.

Mr. H. H. Rogers, Jr., son of the Standard Oil millionaire, and Alvin W. Krech,



MR. F. P. NEHRBAS. The factory superintendent of the E. R. Thomas Motor Company.

president of the Equitable Trust Company, are among the recent purchasers of B. L. M. runabouts.

' Mr. O. E. Vestal, formerly connected with the American Automobile Company, is now sales manager for the Packard car, with the Standard Automobile Company, of Pittsburg, Pa.

Mr. E. M. McIlvain, formerly president of the Bethlehem Steel Company, has been elected president and general manager of the Robins Conveying Belt Company, Park Row building, New York.

J. B. Metcalf, of Berkeley, Cal.; has just received his big Thomas Flyer from the Pioneer Automobile Company, of San Francisco, Cal. He navigates the big car between his Berkeley home and Oakland

Mr. A. L. Kull, the agent of the Wayne and Dragon cars in New York, has just been appointed general sales manager of the Dragon Automobile Company, of Philadelphia, vice Mr. Frank Corlew, re-

Mr. G. C. Lewis, heretofore connected with the Wayne Automobile Company, of Boston, is now at the head of the A. L. Kul! Automobile Company, 1677 Broadway, New York, agents for the Wayne and Dragon.

University of Pennsylvania, recently started from the Brazier automobile garage, Thirty-eighth and Market streets, Philadelphia, on a trip through Maryland in his new 1907 car.

Mr. C. L. Lawrence, of the B. L. M. Mctor Car Company, sailed for Europe on April 19 to visit the Krupp Iron Works in Germany, and several large automobile factories for the purpose of studying motor conditions abroad.

Mr. Fred J. Pardee, of the Pardee-Canary Company, Chicago, Ill., has been appointed general sales manager of the St. Louis Car Company, of St. Louis, Mo., makers of the American Mors, vice Mr. George C. John, resigned.

Mr. John L. Dolson, of the Dolson Automobile Company, Charlotte, Michigan, has been appointed a member of



MR. CHARLES MULLER,

Of the E. R. Thomas Motor Company. Mr. Müller's knowledge gained while with the makers of the Mors has proven most valuable, and he has added strength to the Thomas organi-

the Tours and Race Committee of the American Motor Car Manufacturers' Association for the year 1907.

C. H. Tyler, well known in automobile trade circles, and for six years Eastern representative of the National Motor Vehicle Company, has joined the forces of the Babcock Electric Carriage Company, of Buffalo, N. Y., as salesman.

An automobile party, consisting of the Misses Elizabeth Stovers, Lillian May Hyland, May K. Taylor, of Amsterdam, and Ethel P. Robb, of Albany, N. Y., visted Johnstown recently and took dinner at the Hotel Touraine, Albany.

Charles A. Ackerman announces that he M. Akahoski, a Japanese student in the recently drove from New York to New

Haven, Conn., in a new 12-horsepower Franklin runabout, covering the ninetyfive miles in three hours and a quarter, and consuming only four gallons of gaso-

Mr. Harry Egan, of Empire City track fame, and well known in automobile circles as a racing driver, has just invented a mechanical device for taking the hum out of the gears of high-powered cars. Mr. Egan is having the invention patented.

The following names have recently been proposed for membership in the New York Motor Club: W. W. Haskell, George M. MacWilliam, Louis H. Perlman, A. F. MacWilliam, L. V. Pulsifer, Wayne Murray, Henry F. Holbrook, R. A. Albee, Jr., and R. D. Garden.

Mr. Milton Lusk, one of the members of the firm which handles the Thomas Flyer and Thomas Forty in Cleveland, has an unusual side line. He is a composer and has several song hits to his credit, the latest one being, "Waiting for a Certain Girl."

Herbert E. Law is one of the most enthusiastic automobilists in San Francisco, Cal. Hardly a week goes without a trip in the country in his big Royal tourist. Most of his trips are taken to his country home, known as Chamounix, at Alma, in the Santa Cruz Mountains.

Mr. John C. King, of Chicago, started



MR. RALPH MORGAN, Who occupies the position of Works Engineer of the E. R. Thomas Motor Company.

on a tour of Europe last month, making Turin, Italy, his point of embarkation. He will use for the trip a 35-horsepower Fiat, with four-seated runabout body, which will be delivered to him at Turin, where the body is being built.

newspaper man, well known to many of the writers of automobile news on the daily and trade journals, has been placed in charge of the publicity and advertising ends of the Babcock Electric Carriage Company, of Buffalo, N. Y.

F. E. Long, of Oak Park, Ill., is mapping out a considerable tour for the early summer. Mr. Long will drive East and spend two months through New York and the New England states. His plans also include a run into Canada. Mr. Long will drive a 45-horsepower 1907 Columbia.

The first delivery of a complete Fiat was made last month by the Holland Company to Guy R. McLane, of the Standard Oil Company. The car is fitted with the Fiat self-starting device, seats seven people, and has a long wheel base to insure easy riding. The finish of the body is unusually fine.

The Stamford (Conn.) Automobile Club has been organized with these officers: President, Dr. F. Schoir; vicepresidents, Dr. Rice and J. K. Lawrence; secretary, Dr. Dean Foster; treasurer, Dr. J. Howard Staub. There are ten charter members and fifty applications for membership already on hand.

The Haynes Automobile Company report a record sale of Haynes touring cars. No fewer than eight have been disposed



MONSIEUR JULES TRICOTTEUX. Mecanicien at the Thomas factory, who is responsible for the mechanical perfection of the "Flyer."

of in the last month to the following purchasers: Messrs. Malcomb and McConihe, S N. Minford, William Crabtree, H. Le Roy Randell, H. P. Browning, George Glaser, H. H. Cheney and William Bryan.

Charles E. Duryea, who is considered

John J. Coakley, a former Boston one of the greatest gas engine men in America and whose car won the first two races held in this country, has been made consulting engineer for the American Motor Car Manufacturers' Association, which now consists of forty-one of the largest makers.

Mr. Duryea began to make gas in 1886; started making automobiles in 1891 and was selling cars in 1895. The Duryea wagon won the Times-Herald race in Chicago and the Cosmopolitan race in New York.

It was the Duryea wagon that won the first English event, November 14, 1896, when it traveled fifty-two miles and defeated all the fast foreign cars by more than an hour. A few months later it finished second in the Belgian race.

Colonel Louis F. Heublin, of Hartford, Conn., has sailed for Europe and with the avowed intention of finding how an



MR. GEORGE SALZMAN. Who is assistant factory superintendent of the E. R. Thomas Motor Company.

American motor car will compare with European cars for reliability on European roads, took his new Thomas Flyer with him. The car was crated at the factory and shipped direct to the dock of the liner on which the colonel sailed.

Angus Sinclair has been nominated for president of the New Jersey Automobile and Motor Club of Newark. The nominations for the other offices are as follows: Vice president, Louis T. Wiss; treasurer, James C. Coleman; secretary, H. A. Bonnell; board of trustees, Joseph H. Wood, W. C. Crosby and W. F. Kimber. The election of officers will be held at the annual meeting of the club on May 6.

James K. Christie, who recently withdrew from the firm of Palmer & Christie, importers, has joined the forces of the American Locomotive Automobile Company, his position being designated by General Manager Joyce as "manager city

Mr. Christie's identification with the automobile business dates back to 1900, when he was selling steamers. He has been in the importing line since 1904. He expresses himself enthusiastically concerning the Berliet and the idea of building a car here of imported materials. As



MONSIEUR JACQUES THEILMANN, Who has charge of assembling the Thomas motors, spent many years in the French factories.

an importer he learned the superiority of foreign metals, and after a day at the Berliet factory, in Providence, recently, he said he was deeply impressed by what he saw. He has been in Europe three times and through a number of factories, but says that he never in his life saw anything finer in the way of material and methods than he did at Providence. The rigidness of the tests and inspection there, he says, is the same as in European factories, cylinders and all other parts being thrown aside for the most trifling imperfection, even a slight roughness.

A. E. Schwartz, representative abroad for the American Motor Car Manufacturers' Association, has formed the American Auto Supply Company in Paris, with headquarters at No. 102 Rue la Boetie. Americans touring abroad in cars made by the manufacturers in this association are invited to make their headquarters there.

Mr. Schwartz is well informed on foreign conditions, including licenses, passports and similar necessities for travelers

The Automobile Commissioners at Washington are contemplating the promulgation of a police regulation that will prohibit persons under eighteen years of age from operating automobiles in the District. The adoption of this regulation will be with a view to public safety, as a number of accidents of a serious nature have resulted, it is declared, from the running of big automobiles by irresponsible boys.

#### Crucibles

Crucibles is the title of a very neat little brochure published on the subject of graphite crucibles, which are also known as plumbago or black lead crucibles. The author of this work is Mr. John A. Walker, vice-president, treasurer and general manager of the Joseph Dixon Crucible Company, Jersey City, N. J. The purpose of the little book is to instruct users of crucibles as to the proper use of crucibles, and what may happen by the abuse of crucibles. It tells what graphite is, and why crucibles are made of it. It tells why crucibles should be made of flake graphite. It tells why some crucibles are dark and others light, and the import of that fact.

It gives rules for annealing crucibles, and tells why they should be carefully followed. It tells why it is advisable to buy crucibles in quantities. It tells of the proper shape of tongs and how they should be handled, and how the metal should be placed in the crucibles, and how the crucibles should be placed in the fire. The booklet describes the various fuels used in smelting metals, and their effect on the crucibles. It speaks of the importance of perfect combustion. The book also contains other information; it gives the proportions of metal in commonlyused alloys. It gives the freezing, fusing and boiling points of various substances. It gives the specific gravity of various metals and other commodities. It gives the comparative values of fuels, and much other information of value in the foundry. The illustrations throughout the book are good specimens of photographic art, and the pamphlet is artistically printed and is a credit to its well known author and to the printers.

#### **Blowout Patch**

The enviable reputation of the Traver blowout patch is based on real merit, as has been amply demonstrated in the hardest kind of tests. The patch which is ready to put in place inside the shoe is made of compressed Sea Island cotton, which is the best fabric known for shoes of motor vehicles, and is covered with the best rubber, and is strong and flexible and will remain in position as long as the shoe lasts. It can be used repeatedly as when the shoes are completely worn out it is found that the Traver patch is ready for service, and a car furnished with a few of these handy patches need not be burdened with extra tires. The best shoes are liable to puncture and blow out. The Traver patch fills the breaches of time and circumstance to perfection. Agencies have been established for the sale of the article in the chief cities of the world and its use is rapidly coming into popular favor. The head office is in the Browning Building, 1265 Broadway, New York.

#### Useful Invention Needed

A St. Louis inventor got the ridiculous idea into his head that automobilists are interested in knowing when they are exceeding the legal speed limit and he has invented a device which gives warning when the car is running at a speed that might lead the driver into trouble. Now if that inventor would exert his wits to invent some contrivance that would make constables, policemen and interfering people of that kind believe that an automobile is making only half the speed it is moving at, automobilists will rise and call him blessed, besides buying all the speed decreasing devices he can make.

#### New Cylinder Comptroller

Paul Snutsel, Inc., 1534 Broadway, New York, is introducing in this country a new French cylinder comptroller which is meeting with the approval of many auto-



NEW CYLINDER COMPTROLLER.

mobilists. The apparatus is fixed on the dashboard and connected to the spark plugs. This new appliance, simplicity in itself, allows the driver to detect at once the cylinder that is misfiring. By simply turning the needle on Cyl. No. 1, Cyl. Nos. 2, 3 and 4 will stop working, and Cyl. No. I should turn the engine alone. If it does turn, try Nos. 2, 3 and 4 until you find the misfiring one. Then take off the hood and trouble located will be very much easier to fix. The price complete is \$15.

#### Show Committee Appointed

At the April meeting of the Board of Managers of the Association of Licensed Automobile Manufacturers, held at the association rooms, the new show committee was appointed. Colonel George Pope, of the Pope Manufacturing Company, who has been identified with shows for many years, was re-elected chairman: C. R. Mabley, of Smith & Mabley, was re-elected, with Charles Clifton, president of the Association of Licensed Automobile Manufacturers and treasurer of the George N. Pierce Company, the new

member in place of Marcus I. Brock, assistant general manager of the association, who has been a member of the committee for the past two years.

Mr. Brock, at his own request, was relieved of show duty, owing to increased duties as assistant general manager. The following companies were represented: Apperson Brothers Automobile Company, Selden Motor Vehicle Company, Buick Motor Company, Cadillac Motor Car Company, Electric Vehicle Company, H. H. Franklin Manufacturing Company, Hewitt Motor Company, Knox Automobile Company, Locomobile Company of America, Northern Motor Car Company, Olds Motor Works, Packard Motor Car Company, Peerless Motor Car Company, George N. Pierce Company, Pope Manufacturing Company, Pope Motor Car Company, Royal Motor Car Company, Alden Sampson, second, Smith & Mabley, Inc., F. B. Stearns Company, Stevens-Duryea Company, Studebaker Automobile Company, Waltham Manufacturing Company and Winton Motor Carriage Com-

#### New Shock Absorber

The Reuckert Compound Shock Absorber is an ingenious contrivance consisting of a coiled spring set in slidably engaged rods between the spring and frame. It has the double faculty of not only taking up the up shock but the down shock also. It does not check suddenly, but under the hardest tests, gives an easy rolling motion to the car. A series of severe tests has demonstrated the fact that a car fitted with a complement of these shock absorbers and having solid rubber tires will ride as if on pneumatic tires. On the other hand a car fitted with pneumatic tires becomes a delight when the shock absorber attachments are added. Price lists and particulars may be had from Mr. T. E. Curry, 72 Leonard St., New York.

#### Independent

First Stranger (on train)—Do you ever quarrel with your wife?

Second Stranger-Never.

First Stranger—Have any trouble with the hired girl?

Second Stranger-Not me.

First Stranger—Don't your children worry you at times?

Second Stranger-No, indeed.

First Stranger—Say, I don't like to call you a liar, but—

Second Stranger—Oh, that's all right. I'm a bachelor.—Chicago News.

Being able to elude one's just deserts is a useful art. It is keeping many a rogue in silk and broadcloth, when he should be wearing stripes in some prison.

## Garage Notes

Mr. C. P. Yeager plans to establish a Tire Company, of Marion Ohio. retail agency for the Pullman in Chicago capital stock is \$15,000. very shortly.

Mr. Owen H. Fay is building a salesroom at 245 Michigan avenue, Chicago, for the reception of the Elmore.

Mr. Augustus Doll has opened a garage at 131 East Philadelphia street, York, Pa. He will handle the Ford in that vicinity.

The Manchester Auto Garage Company, of Manchester, N. H., are making a specialty of the Maxwell car this season. The

Mr. S. W. Curtis has been granted a permit to erect a garage at 245 Prospect street, New Haven, Conn. The estimated cost of the same is \$900.

Mr. G. J. Mulvane is building a garage at Seventh and Quincy streets, Topeka, Kan. It will be two stories in height, 50 by 70 feet, and cost \$6,500.

The National Sales Corporation have opened a branch at 1436-38 Michigan ave-

Mr. Lewis P. McNamara, for six years assistant manager for Smith & Mabley, is handling Renault cars, with headquarters at 232 West Fifty-eighth street, New York City.

Work has been begun on a new automobile garage for Horace B. Day, at 1144 First street, San Diego, Cal. The total cost of the new structure will be about

Mr. J. T. McWilliam, brother of G. M. McWilliam, president of the Darracq Automobile Company of America, has se-



ONE OF THE FOUR GARAGE FLOORS IN THE NEW BUILDING OF THE AUTOMOBILE CLUB OF AMERICA.

Car Company hope to be established in number of lines of accessories. their new salesrooms and garage by June 1.

The new garage of the Harvard Automobile Company, in Quincy Square, Cambridge, Mass., is open and ready for occupancy.

The Buick Motor Company have purchased an additional fifteen acres of land and will use it for experimental and testing purposes.

F. Hubbard and J. J. Simpson expect within a short time to open a garage in the Simpson Building, on Seventh avenue, Carbondale, Pa.

Thompson have formed the Archer Auto D. Cadwell is in charge of the plant.

Pardee & Canary, Chicago, Ill., have added to their string of motor car agencies the agency for the Hankscraft Motor Boat Company, of Madison, Wis.

Omaha has a new garage, that of the Berger Automobile Company, which is located at 2025 Farnam street. This firm sells Auburn's and Wayne cars.

Mr. Herbert Marchand has the contract for the one-story brick garage, 60 by 70 feet, at 118-122 East Tenth street, Los Angeles, Cal., for M. M. Morrison.

The Summit Carriage Mobile Company have opened a garage and factory at 512 W. R. Archer, Anna Archer and H. Lafayette street, Waterloo, Iowa. Mr. E.

The Chicago branch of the Buick Motor nue, Chicago, Ill. The company handle a cured agency quarters for the Darracq at 1502 Michigan avenue, Chicago.

> The Preston Automobile Company, of Walla Walla, Wash., have contracted for the erection of a brick garage on Spokane street. It will measure 55 by 120 feet and be one story high.

> The American Auto-Parts Company, Boston, Mass., have organized. The capital is \$20,000, and the corporators are Frank S. Hawkins, Selah R. Eaton and George M. Faulkner.

> Mr. J. F. Beck is planning to erect an addition to his automobile and carriage repository on Genesee avenue, Saginaw, Mich. The addition will be 108 by 40 feet, and two stories high.

> Mr. E. A. Krause, agent for the Rambler, at Allentown, Pa., has opened a gar

age and salesroom in connection with tery, Me., have filed articles of incor-Weston & Grether's machine shops at Church and Walnut streets.

Mr. D. F. Sullivan is building another garage in Manchester, N. H., to connect with his present building on Myrtle street. The dimensions of the new structure are 50 by 80 feet.

The Joplin Automobile Company, of Joplin, Mo., are building a concrete addition, 34 by 50 feet, to its present garage poration to manufacture automobiles. The capital is \$1,000,000. President, A. H. Feavey; treasurer and clerk, J. W. Hawes.

Mr. J. Costa has purchased the property at 2117 North Broad street, Philadelphia, Pa., and will, when alterations are completed, have one of the largest and best equipped automobile garages in the State.

The Geisel Automobile Company, of Springfield, Mass., have begun the erection the Bedford avenue dealer, in Brooklyn. This year is expected to be a record one for the pioneer device.

The Miami Motor Car Company, of Dayton, Ohio, have elected the following officers: President, R. A. Berbruck; vicepresident, C. S. Crane; secretary and treasurer, E. H. Brown. Spencer Crane is the general manager.

The F. A. Nickerson Automobile Company, of Portland, Me., have broken ground for the erection of a new garage on Congress street, in that city. The new structure will measure 50 by 50 feet, and will be two stories in height.

The Harper Garage Company, Salem, Mass., have filed articles of incorporation and purpose to deal in motor vehicles of all kinds. President, William A. Rowe; treasurer, George A. Rowe; clerk, Fred R. Harper, all of Beverly, Mass.

The Washington Electric Vehicle Transportation Company, one of the subsidiary companies owned by the Electric Vehicle Company, has been sold to the Dupont Garage Company, of Washington, the transfer having taken place April 1.

The Franklin Square Automobile Company, Boston, Mass., have organized to deal in automobiles, etc. The capital is The incorporators are James \$20,000. H. Waterhouse, president; Frank D. Derring, treasurer; Henry W. Huntley, clerk.

Work has been begun on a garage at 216 to 220 North Broad street, Philadelphia, for Edward H. Godschalk, president of the Keystone Motor Company. The building will be of reinforced concrete, three stories high, and will cost \$110,000.

Mr. Leon Rubay, the well known importer of high class sundries and ignition appliances, announces his removal from 140 West Thirty-eighth street to his new building, 1697 Broadway, between Fiftythird and Fifty-fourth streets, New York

The Kenyon Machine & Auto Repair Company, of Westerly, R. I., are building two additions to their garage at 85 Main street. The addition to the front will measure 30 by 20 feet, and the side addition, 15 by 15 feet, will be used as a machine shop.

Lester C. Faurot, formerly with the Maxwell-Briscoe Company, and Herbert Abrams, formerly with the Lozier Company, have opened the Larchmont Garage, on the Boston post road, near Larchmont, and intend to do a general automobile and garage business.



NEW HOME AND GARAGE OF THE AUTOMOBILE CLUB OF AMERICA.

in that city, which will give it a capacity for a total of sixty automobiles.

Frederick Fox & Company have leased to George H. Tyrrell, from the plans, the new garage building now being erected in Webster avenue, near 195th street, New York, for a long term of years.

The J. B. McIntosh Company, of Detroit, Mich., are about to open a new garage. In their new quarters they will have eight floors, each 120 feet deep by 20 teet in width.

The Hutchinson Garage Company has been formed by Lon Smith and P. B. Horner, at 29 East Avenue A, Hutchinson, Kan. They will handle the Cadillac and carry a full line of accessories.

The Western Automobile Company have contracted for a garage at 1928 and 1930 North Twentieth street, Philadelphia, Pa. The building will be two stories high and 36 by 113 feet in dimensions.

of a one-story concrete garage in Taylor street. The new structure will measure 100 by 175 feet and will cost about \$10,000.

The Mitchell Automobile Company, St. Joseph, Mo., have leased a building at 310 South Fourth street, in that city, to be used as a garage and repair shop. The shop will be equipped with modern ma-

The Standard Automobile Company, of Pittsburg, Pa., will shortly break ground for the erection of a six-story fireproof garage on Aiken avenue. The building will measure 100 by 150 feet, and will cost \$200,000.

Mr. F. S. Corlew, vice-president of the Dragon Automobile Company, has completed arrangements for the construction of a two-story garage in the rear of the Dragon salesrooms on Massachusetts avenue, Boston, Mass.

Among the orders received last month for Truffault-Hartford shock absorbers The Eagle Automobile Company, Kit- was one for fifty sets from Julius Bindrin, The Pioneer Manhattan Automobile Exchange, New York, have incorporated to manufacture, repair and deal in automobiles, and instruct chauffeurs. The capital is \$5,000, and the incorporators are Louis E. Speer, Sidney D. Lichenstein and William Nolan, all of New York.

The E. R. Thomas Motor Company recently announced the reorganization of the Martin & Hart Motor Company, their agents in Philadelphia. The new firm is known as the United Motor Car Company, which will handle the Thomas Flyer and Thomas Forty in Philadelphia. Mr. H. Allan Dawson is president of the new company and Mr. A. H. Dorsey vice-president and general manager.

Mr. M. J. Wolff has opened a new sales and exhibition room in the Bedford Garage, on Bedford avenue, near Atlantic avenue, Brooklyn, N. Y. Mr. Wolff is the prorietor of the Williamsburg Automobile and Storage Company, and has the Brooklyn, Long Island and Staten Island agency for the Aerocar. He will continue the office and garage at 159 Clymer street.

C. P. Werner & Co. have transferred the Moline headquarters from 1421 Michigan avenue to 1502 Michigan avenue, Chicago, Ill., sharing the building with G. E. Holmes & Co. and forming a working agreement with that concern whereby their interests are combined without affecting the individual identity of the two companies.

Edward M. Carter, a practical automobile mechanic, who understands both steam and gasolene machines, has opened a garage in the rear of 130 Bridge street, Springfield, Mass., the place formerly occipied by Norcross & Cameron. The place will be known as the White garage, and, while it will be given over largely to the overhauling and repairing of automobiles, supplies will be handled and steam cars will be sold.

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#### The New Home of the Automobile Club of America

The Automobile Club of America formally opened its new eight-story house on Fifty-fourth street, west of Broadway, on Thursday afternoon, April 18. In the new establishment the largest auto club in the land gives New York City the best and most up-to-date motoring home in the world.

The exterior of the building is of simple and dignified proportions. The materials are light stone, marble, Indiana limestone, white brick and terra cotta, the latter used in two other colors for decoration in the heads of the window arches on the second or main floor.

The street floor is taken up mostly by a foyer for the assembling of cars, the re-

maining space being occupied by the office of the garage superintendent, a reception room for women and the members' locker room, in addition to the large lobby which leads to the wide staircase which mounts to the second floor. On this floor is the assembly room and library, 100 feet long and two stories high, of the architecture of the period of France's Premier, it being the reproduction of the hall of a famous chateau. On this floor are also the grill room and the governors' room, while the secretary's offices are on the mezzanine floor above.

There are also four storage floors for cars belonging to members of the organization and a machine and repair shop on the top floor. In the basement there is A factory newly equipped with special tools and machinery is now in operation in Old Town, Me., where is also located the general offices of the company. It is the aim of the Kilgore Mfg. Co. to keep on hand large stocks of material and ample stocks of finished goods to fill all orders received within twenty-four hours.

Mr. S. F. Heath has been installed as sales manager.

The Imported Car Repair Company, incorporated under the laws of New York State, will install in the Motor Mart of New York, at Broadway and Sixty-second street, a machine shop for the purpose of repairing the highest grades of automo-



THE MAIN ASSEMBLY HALL.

an electric generating plant, with the boilers facing toward the street, so as to facilitate the handling of coal and ashes. Under the vault the gasolene is stored in numerous tanks so that the contents of each will not exceed the amount allowed by the Fire Department. These tanks are filled from pipes terminating at the curbstone line. On the storage floors there are movable partitions with screw bases to divide off stalls for members desiring to keep their cars in locked stalls. There is no illuminating gas in the building.

The manufacturers of the Kilgore Pneumatic Shock Eliminator have recently incorporated as Kilgore Manufacturing Co., under the Maine laws, with an authorized capital of \$100,000 and with the following officers:

President, Herbert Gray; secretary and treasurer, George H. Richardson; superintendent, Frederick O. Kilgore.

biles. Magneto work will be a specialty. The officers are M. S. Gilmer, president; R. B. Whitman, secretary, and J. T. Gilmer, treasurer and manager. Mr. C. W. Adams will be the chief mechanic.

What is likely to be the nucleus of a baseball league, made up entirely of teams representing the automobile establishments of New York, was started May 2 at the annual outing of the Riverside Social Club, an organization composed only of garage attendants, chauffeurs, etc. Michael J. O'Connor, secretary and treasurer of the club, whose headquarters are at Seventh-seventh street and Broadway, says that the plan has already met with great success.

The Dupont Garage Company will have the exclusive sale of Columbia gasolene cars, electric carriages and electric commercial vehicles in the District Columbia. Several of the employees of the Washington Electric Vehicle Transportation Company have accepted positions with the Dupont Company and the latter concern expects to greatly increase the sale of Columbias in the District. It also proposes to do a general garage and livery business at the Panorama Building, Fifteenth street and Ohio avenue, in connection with its former business on M street.

#### New City Agency

The Moon Motor Car Company of New York has been organized to handle the Moon cars in this territory. The Moon car, which is manufactured in St. Louis, is designed by Louis P. Mooers, the well-known American designer, who built the famous "Green Dragon" in which Barney Oldfield scored so many victories. The proprietors of the New York agency are R. Gilhooly and D. D. Holmes—the latter well known in automobile circles as a skilled race driver.

With the announcement of the forming of the Moon Motor Car Company of New York comes another, to the effect that Louis P. Mooers is building a car of this make for the next Vanderbilt Cup

#### Welch Factory Rushed

The recent exploits of L. H. Perlman in his Welch car, together with the caustic challenges which he has been hurling in all directions since his winning of the American touring car championship at Ormond, seem to have riveted the attention of the automobile public on this very efficient make, with the result that a night and a day shift have had to be employed at the factory at Pontiac, Mich., in order to cope with the sudden influx of orders. Among the recent purchasers of Welch cars are former Mayor F. W. Wurster, of Brooklyn, Col. N. H. Heft, Charles E. Morris, Frank Cheney, Jr., Mrs. Elizabeth S. Moore, H. H. Westinghouse, G. E. Pancoast, J. Herbert Mullin, A. J. Wells, Augustus Pabst, Samuel Lemp and Nat Goodwin.

#### Will Occupy Dalton Factory

William P. Wood, treasurer and manager of the Pittsfield Spark Coil Co., announces that the company has secured a new plant at Dalton, Mass., and will remove to that city in the near future. At the same time it was announced that Senator W. M. Crane and Zenas Crane had acquired a half interest in the business.

In discussing the proposed change Mr. Wood said that the growing business of the concern had compelled the officers to look about for increased facilities. Upon investigation of the facilities for expansion at the Renne avenue building it was ascertained that

there was not sufficient room to meet the requirements of the business if the present rapid growth should continue and new quarters had to be sought for.

Some little time ago, Mr. Wood said, H. A. Barton, of Dalton, suggested to him the advisability of the company leasing the Dalton factory. At the time it did not make any particular impression upon him, but later, after the Messrs. Crane had taken an interest in the company and the need of larger quarters became imperative, the matter was brought before the officials of the company and met with favorable consideration. The Dalton factory, which is three stories high with a basement and is 210 feet long by 40 wide, will give the company 33,600 square feet of floor space, a little over three times that of the present plant. The building stands in a large open lot with plenty of sunlight and fresh air, and is in many ways preferable to the one now occupied by the company.

The company now employs 120 hands and is increasing its force almost daily. It was organized three years ago and has a capital of \$20,000. Michael Casey is president and Wm. P. Wood treasurer and manager.

The Weybridge motor track, near London, is scheduled for opening on July 6. This is a three-mile circuit and is well banked on the turns. A number of schemes have been launched in this country for special automobile tracks, ranging from two to ten miles in circumference, but not one has materialized. The "curtain raiser" for the Weybridge track is to be an attack on long distance records by C. F. Edge, the well-known English motorist, in a Napier. Edge says he is confident of averaging sixty miles an hour for twenty-four hours on the three-mile circuit.

#### More Automobilists

To the uninitiated the total of new registrations of automobiles in New York State during the past month, which was 1,174, will suggest an excellent selling season. These registrations, which are the most reliable basis for judging the amount of business done in the State, do not, however, come up to the expectations of many of those engaged in the business. The bad weather which prevailed during the month may be largely responsible for this. There is every confidence in the New York automobile trade that April will eclipse all previous selling and registration records.

The number of automobiles registered in New York State up to the first of the present month is 37,850, of which probably three-quarters are still in use. The registrations in the State of New Jersey total 26,650.

#### Long Drive by Woman

By driving in a 35-horsepower Matheson from Wilkesbarre, Pa., to New York via Port Jervis, a distance of 215 miles, through snow and mud and over mountain ridges, Miss Marie Eger, a slight young woman barely out of her teens, has qualified as one of the best women automobolists in the country. With her uncle, Charles Greuter, as companion, Miss Eger left Wilkesbarre on Sunday morning, April 14, and after many hardships arrived in New York late Monday night.

Part of the trip was made in a heavy snowstorm in the Pocono Mountains, while rain and mud were other conditions met with. The Hudson was crossed by ferry to Fishkill, and near Ossining the big car skidded into a five-foot ditch. A gang of laborers lifted it back to the road.

The Royal Automobile Club of Austria will hold a touring car race over a 715-kilometre circuit on May 24, 25 and 26. The start and finish are to be at Vienna. Stock gasolene driven cars of any nationality or make are eligible. The regulations specifically prohibit a speed of more than 40 kilometres an hour.

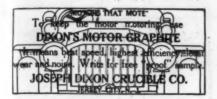
#### Big New Garage for Denver

Denver is to have one of the largest automobile garages and repair shops in the country. It will be constructed at 1645 Court place and the extensive general automobile business will be carried on by John M. Kuykendall, the well-known horseman and president of the Denver Omnibus & Cab Co.

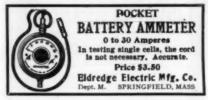
The new building will be three stories in height with basement. It will be constructed of brick and provisions will be made for the addition of two more stories later. The measurement will be 50x125 feet. Truss construction will be used throughout, eliminating posts on the floor. The initial expenditure will be \$40,000. It is said that John W. Morey and Charles Boettcher are interested in the construction of the new block.

"Under President Hotchkiss," said an automobilist, "the American Automobile Association has become a great promoter of harmony. The few dissenters of Pennsylvania and Long Island are reconsidering and the prospect is that before the present administration ends the motorists of all the states will express by their active support of the national body their faith in the adage that 'in union there is strength.'"

The Italian Floris cup competition which was run last month was a most successful event. The course goes through a most rugged and picturesque country, but the roads are splendid and very high speed was attained in some parts.







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### MENDENHALL'S ROAD MAPS

ROAD MAPS Specially designed and bound in pocket EASTERN—New York State, 76.2. New Jersey, 96.2. Feasily and special s

#### A Lucky Rough Ride

An incident told by Sophus Tromholt in his "Under the Rays of the Aurora Borealis" goes to prove, first, that automobiles are not the only dangerous conveyances of the world, and secondly, that the baby Laplander is endowed with a temperament more placid than that of his tiny American cousin. In writing of the reindeer sleigh, the author says:

The pulk is like a low boat cut in halves and closed behind. In front is a skin covering. Its speed behind the reinder is terrific.

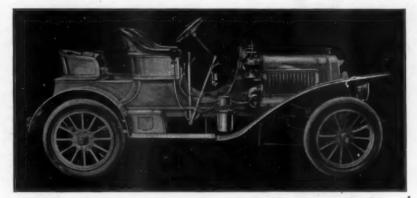
In Lapland the babies are swaddled in a contrivance of sheepskin and moss called a komse. It is a mixture of dress, bed and cradle, framed with wooden ribs in the shape of a little trough. A wooden

divided air chambers to prevent a fall in case of accident, and will be 35 feet long, 20 feet wide, weigh 1,200 pounds and have a forty-horsepower motor. It will carry four persons.

Mr. Brewer expects to have a working model completed in three months, and asserts that in it he can soar through the air at will and with perfect safety.

#### 1907 Pope-Hartford Model L Runabout.

The decidedly rakish appearance of this car is a result of placing the steering post on such an angle that it brings the wheel well toward the driver's seat, together with the embodiment of the long sweeping fenders. The body design is



POPE-HARTFORD MODEL L RUNABOUT.

disk at the upper end forms a protection for the head. This mode of caring for the baby is the safest and most consistent with the Lapp manner of living. It is easy to handle. Mothers, when calling, stick the end of the komse into the snow and feel at liberty.

I once saw a reindeer bolt. In the pulk was a child in its komse. The pulk capsized at the outset and was dragged, bumping over the rough ground. I naturally assumed that the child's brains were dashed out.

The reindeer was captured after half an hour's chase on skis. The animal was standing a couple of miles from its starting place, the rein having caught in a bush. The pulk was righted and the baby found sleeping placidly. The komse had parried the blows and the child had not even been awakened by its rapid and rough transit.

#### A New Air Automobile

Inventing of flying machines seems to be very active at present, and much persistence is displayed with very meagre results. The latest patent in this line has been granted to William J. Brewer, of Trenton, N. J., who proposes to revolutionize aerial navigation. His air-automobile will be made of aluminum, with

new and cleverly conceived. The length is relieved by a third seat located on the rear deck between the two bucket seats. This seat is furnished with a lazy back and is made removable, allowing ample luggage room when required.

#### New Use for Safety Device

What was meant for a safety device, pure and simple, when it was first installed has been turned into a convenience as well by a number of Thomas owners and drivers. This is the ratchet and pawl back-stop device on the rear hubs which prevents the car backing down hill when it is brought to a standstill while ascending a grade. It does not take the average driver long to find out, however, that this device may be used at other times than during an emergency. 'As a consequence, it is a common custom for them to throw the pawl into contact on even the slightest grades, since, should it be desirable to stop, it is not necessary to use the brakes.

Some one counted up not long ago and found that there were sixty-four trades and professions represented in the work done on a motor car before it could be compléted.

#### The Albright Spark Plug

The Albright spark plug is rapidly coming into popular favor. Its reliability has been demonstrated during the last three years and it undoubtedly has taken rank among the most essential requisites of a perfectly equipped car. The ingenious contrivance in making the lower electrode take the form of a series of sharp points has the effect of largely increasing the size and brilliance of the spark. The importance of a strong spark is known to all who have ever run a motor car. The makers of the Albright spark plug claim that the ordinary blunt-pointed plugs offer considerable resistance to the electric current, with the result that much of the



SPARK PLUG.

force of the current is wasted in breaking through the hardened crusts of the rounded points. Submerging in oil does not affect the sparking qualities of the plug. and it may be added that the general construction and finish is of the best. Paul Snutzel, Inc., 1619 Broadway, is sole agent for the device in New York State.

#### Fulton Knows It Well

"Do you know what is the matter with Windbag Fulton?" said the hostler to Jimmy French, the fireman of 418, as he shut off the injector with a "chunk." "No," said Jimmy, "except that when he goes to tell you anything his coal all drops through his grate, and you never get either steam or smoke out of him."

"Oh, you miss the whole point," said the hostler, in the tone of a man who believes himself to be a fine judge of "The trouble with Fulton is that when he hears anything he tries to match it with some stuff out of his own box. If any one has seen anything wonderful anywhere all over the whole wide world, Windy lets on he is quite familiar with the locality. Do you know, if he heard Satan himself describing the infernal regions, Fulton would say, 'That's so: I've run on the Hell Central for years and know the place well."

#### Rubber Goods Liquidation

In the annual report of the Rubber Goods Manufacturing Company, submitted at the meeting of the stockholders last month, President Charles A. Dale says there has been a large increase in volume of business and net profits over previous years. This, he says, has been very largely due to co-operation with the United States Rubber Company, which owns almost all the stock. In order to carry this co-operation still further it is proposed to liquidate the Rubber Goods Company and merge it with the United States Rubber Company. A committee now has this matter in hand. The litigation with the Pope Manufacturing Company has been settled. Not a small part of the prosperity of the company has been due to the able management of President Dale.

#### Bunkered

A man, by way of a joke, dropped a golf ball into a nest his ancient parrot had built in the corner of its cage. Polly sat with exemplary patience on her novel egg, and apparently pretty well heart-broken when weeks went by and she found herself unrewarded. At last parrot flesh and blood could stand it no longer. A terrible screeching brought her owner downstairs at three o'clock one morning.

"What's the matter, Polly?" he asked, as he noticed the bird's beak was chipped trying to get at the egg's interior.

"Matter!" screeched the, bird; "why, I'm bunkered."-Tit Bits.

#### An Obliging Auto.

Agent-This is the automobile you want. You never have to crawl under it to fix it. Sparker-You don't?

Agent-No; if the slightest thing goes wrong with the mechanism, it instantly turns bottom-side up.-San Francisco Chronicle.

Berliet, of France, has for several years been using a vanadium alloy for various parts, including the cylinder castings of the engine. These same castings are imported by the American Locomotive Automobile Co., with the other metal parts, for the construction of the Berliet car in its Providence factory. Vanadium adds greatly to the elasticity and ductile strength of steel and to the longevity of it. One per cent of vanadium is said to add as much tensile strength to steel as 10 per cent of nickel. Certain iron mines of Sweden, the output of which is monopolized in Europe, have long yielded an ore containing vanadium.



The "full-jeweled" air-cooled Corbin is distinctly the best \$2,500.00 value in the market. See it before deciding on your 1907 car.

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Standard-\$1.50-Metric

Write for " The Man a-Motoring "

The Automobile Club of Springfield, Mass., has decided to hold an automobile show this spring, and plans for the coming event are now well under way. The attraction will take place from May 25 to June 1, inclusive, at Hampden Park, and it is said that it will be the largest of its kind ever given in New England. William E. Dobbins is the manager of the

#### Thirteen Years of Automobile Building

The Smithsonian Institute at Washington has recently recognized the fact that the Haynes' people are the oldest automobile builders in America, by obtaining for its museum the first car built by this company.

The genius who developed this car, and



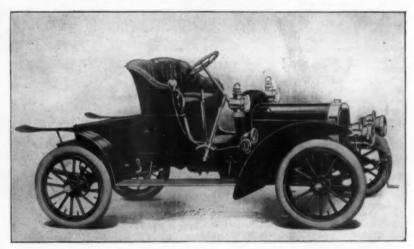
THE HAYNES OF 1803.

who has been responsible for many of the features of automobiles which are standard, was Elwood Haynes. It was he who recognized the possibilities of the gas engine applied to what was then called the horseless carriage. The car which he built is illustrated herewith. It was the first gasolene propelled autosolves the old rear axle problems, and enables even the high-powered models to use direct shaft drive without side chains.

By way of contrast with the car of 1893, we illustrate the Haynes model of 1907, which shows a new runabout type of Haynes which is proving very popular.

Alfred Reeves, general manager of the American Motor Car Manufacturers' Association, says that although some automobile manufacturers are disinclined to encourage the 1907 tour of the American Automobile Association, the members of the A. M. C. M. A. are in favor of the tour almost as a unit. He declares the "independents" believe that the public is entitled to have proved the quality of cars and their ability to negotiate long

Marshall E. Reid, of Buffalo, has found a new use for the rumble seat of his runabout. When he ordered a Thomas Forty he had special measurements made for a rumble seat with a high back, on which he will carry his constant companion, a valuable French collie, which he imported several years ago. The dog has already learned its part of the game and only Mr. Reid himself can coax him out of the



HAYNES RUNABOUT FOR 1907.

mobile to be built in America, previous cars having used either steam or electricity. It is said that this car, although it has seen many years of service, is still in fair condition and can be made to run by a driver who knows how to manage it.

Since 1893, Elwood Haynes has been continuously building automobiles in a conservative way. The Haynes cars were the first to make use of make-and-break ignition and to adopt the side-entrance body and the use of aluminum alloy. At the present time, all their cars include an improved patented feature called the roller-pinion and bevelled sprocket direct drive. This is an ingenious device which seat when the car has been brought up along a curb.

The Gemmer Engine Works, Indianapolis, owned by Geo. Barcus and A. B. Rowley, makers of automobile engines, and employing 100 men, will be removed to Detroit, Mich. The concern has contracts ahead to run a year. Detroit capitalists organized a syndicate and took over the property, and will transfer the business in July. Messrs. Barcus and Rowley have an extensive manufacturing plant of their own, and they will use the space vacated by the Gemmer works in increasing their out-

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		[ availa, V. W

## New Jersey Notes and News.

John Birkenhauer has secured a 30-horsepower Pope-Hartford car.

William E. Howell has purchased a 20-horsepower Stevens-Duryea car.

M. O. C. Hall, of the South Orange garage, has overhauled his establishment.

Dr. W. W. Heberton, of Charlton avenue, South Orange, has purchased a new car.

Mr. W. T. Jones, of Elizabeth, received his new 35-horsepower Matheson runabout last month.

Dr. Watson B. Morris, of Irvington avenue, South Orange, has purchased a new Cadillac car.

The Calvert-Zusi Automobile Company received three carloads of Winton cars a short time ago.

A deal was recently closed by Herman Koehler, of Newark, for the erection of a big auto garage.

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Mr. C. E. Meyer, of Elizabeth, has received his 50-horsepower National from the F. E. Boland Company, of Newark.

Mayor James Furber has bought a 50-horsepower National from the local agents, the F. E. Boland Motor Company of Newark.

Mr. Charles Weldon, of Newark, took a run down the coast recently in a Winton, but found the going poor in most places.

Eugene V. Connett, Jr., of South Orange, has secured his 35-horsepower Locomobile from the Greene Motor Car Company.

Mr. Charles W. Calvert, of the Winton agency, Newark, recently went on a trip through the State in the interests of the Winton car.

Edward P. Beach, of Avon avenue, Newark, took a trip to Asbury Park in his Packard car recently. He was accompanied by his family.

Mr. E. H. Peirson, of East Orange, accompanied by his family, started last

month on a five or six day trip to Boston in his Thomas car.

The North Jersey Motor Car Company delivered a Cleveland thirty-five horse power to T. F. Reynolds, of Llewellyn Park, last month.

Mr. Howard Ballantine, of Woodbridge, has received his 50-horsepower National from the F. E. Boland Company, Newark agents for that car.

A sixty horsepower Thomas car will be used as a pilot in the May endurance contest to be run by the New Jersey Automobile and Motor Club.



HOW THEY BEGIN IN NEW JERSEY.

Mr. G. D. Ryall, Jr., of Passaic, has bought a regular stock Dorris touring car, which he will have stripped for racing purposes this season.

The Autovehicle Company have received one sixty and two forty horsepower Thomas cars, which will be used to fill orders previously booked.

Mr. Harry B. Haynes, of the Paterson Evening News, has purchased a 50horsepower Matheson from the Matheson Company of New Jersey, of Newark.

The Roseville Motor Company, agents for the Compound and Dragon cars, have delivered a 16-20 horsepower Compound to W. E. Davis, of Morristown.

Leslie P. Ward and C. H. Hunter, of Newark, will enter their Thomas runabouts in the three-day automobile endurance contest of the New Jersey Automobile and Motor Club.

Mr. J. B. Ryall, of the Matheson Company of New Jersey, has ordered a 6o-horsepower Matheson runabout, which he will enter in all races held in this section the coming season.

Mr. Frederick N. Sommer has purchased a 1907 Packard from the Motor Car Company of New Jersey, this being the third car of that make he has bought. The car will be delivered May 1.

The first Dragon car to be sold since the arrival of the first allotment of that make of car was made last month to W. G. Fahnestock, of this city, who is president of the Horton cocoa factory.

Ed. B. Vernon and Charles E. Norris, of Newark, have each ordered a 35-40 horse power model A Moline touring car from the New Jersey Automobile Company of Springfield avenue.

Mr. Ferdinand Kuhn, of Passaic, has placed an order for a Matheson 50-horse-power Chassis, with the Matheson Company, of New Jersey. Mr. Kuhn will have a special body built to his order.

Mr. William Vey, lately with the Essex Auto Company, has gone back to his first love, the Austin Auto Company, where he will have entire charge of that concern's business.

Mr. A. T. Purcell, formerly manager of the Dorris Company of New Jersey, has been superseded by George D. Ryall, president of the Dorris Company of New Jersey, Newark, who will hereafter act as manager of that concern.

Isaiah Peckham & Co., Newark, N. J., who recently took up the business of automobile insurance, are doing a land-office business in that line. A large number of prominent automobile owners have taken out policies in the Insurance Company of North America, which the Peckham company represents in this vicinity.



On the market for three years this plug has fully demonstrated its worth

HECTERICAL Total States of Total States of The Line Produce Brench I 1534 BHOAdway, New York Supplies to Only Place in to Only Place in the United States to Only Place in the Product Brench I 1534 BHOAdway, New York Supplies Timer only makes connection for each explosion, during which time just so much current can flow through the primary coils, entirely separate from secondary wire to which plug is attached; and the easy escapement over the sharp points of the "ALBRIGHT" permits the full amount of current to pass through these points; while on the ordinary bluntpointed plugs the resistance is so great that more than one-half of the current is wasted away.

Owing to the peculiar and original construction of the air-space above the sparking points the "ALBRIGHT" is proof against sooting or short circuiting. Even should the walls of this air-space become coated with carbon, the resistance between the points will be so much less than over the carbon deposit that the spark will always jump between the points, and the "ALBRIGHT" needs cleaning only about as often as your engine needs overhauling.

ELECTRICAL

ICAITION

Mr. John R. Ball, of the Merkel Motor Company, manufacturers of that wellknown motor-cycle, has been in Newark for several days arranging demonstrations and erecting agencies for the "Merkel" in this section of the country.

A Lozier touring car, driven by E. P. Earle, president of the Nipissing Mining Company, who recently purchased a car of that make, made a run of about 150 miles through northern New Jersey recently. Mr. Earle was highly pleased at the way the car went along. Mr. Earle has owned a number of different makes of cars, but thinks he has reached perfection with his new possession.

### New Jersey Automobile @ Motor Club Contest

On May 30 and 31 and June 1 the New Jersey Automobile & Motor Club will conduct an endurance run contest for two, silver trochies, one given by Shenley, the other by Angus Sinclair. The contest will consist of three runs that will take the contestants and their friends through some of the most attractive and interesting places in the State of New Jersey.

The contest will be between two classes of cars. The Shanley trophy will be for touring cars; the Sinclair trophy for cars of the runabout class. The trophies will become the absolute property of the winners.

The runs will be as follows: On the first day, from Newark to Washington, N. J., and return, a total distance of about 150 miles. The second day will be devoted to a run from Newark to Atlantic City, 132 miles, and on the third day the cars

wili make the return journey to Newark.

These are short runs and partake more of pleasure than a contest, but the penalties for failure to adhere strictly to rules are likely to disqualify all but careful and skilful drivers.

#### PENALIZATIONS.

Points for each minute or part thereof.

To arrive at any control more than 5 minutes before scheduled time, 2; to arrive at any control more than 5 minutes after scheduled time, 2; to stop car, or motor, between controls without making repairs or adjustments, 3; to stop car, or motor, for purpose of making adjustments, repairs or replacements, 2; to repair car

or make replacements with motor running, 1; to have one or more persons render assistance in any way, the time of such person or persons will be charged at double the rate as, and in addition to, that charged against the driver.

No penalty will be noted against puncture of tires, but if a puncture occur and the car does not arrive at the control within the prescribed time, point will be scored against the car, as above, for each minute late.

No record will be kept of the amount of oil or gasolene used, but neither must be put into the tanks unless under the supervision of the observer, and then only while a car is in control.

No time allowance shall be made for



MARCH SCENE IN NEW JERSEY.

making replenishments in controls beyond the time allowed herein for leaving such control, but should the engine be stopped while such replenishments are being made, except when in the noon or night controls, penalizations herein provided shall be charged.

#### INTERPRETATION OF RULES.

The interpretation of these rules shall rest entirely with the committee, who may alter or add to or omit therefrom, if necessary, from time to time. In the event of a point arising not now covered by these rules, the committee shall have power to decide upon the point, and its decision shall be final, and shall thereby become a rule of the contest.

#### COMMITTEE.

The word "committee," wherever it occurs in these rules, shall be held to mean the Contest Committee of the New Jersey Automobile and Motor Club, or any sub-committee or representative to whom the Contest Committee may delegate the powers, or any of them.

#### SPECIAL.

The right is reserved to disqualify a contestant for excessive speed. A careful regard for the laws will avoid the chance of disqualification. To enforce this rule a special system of checking will be instituted.

The first day's run is through a region particularly rich in historical memorials.

Part of the journey is over roads that Washington and his army often traversed in their numerous marches between Elizabethtown and Morristown, and spots will be noted where conflicts raged that have been dignified by the name of battles. There is scarcely a spot on the route that has not been the scene of heroic deeds or of pathetic suffering. If properly used the trips may be made continuous lessons on New Jersey and United States history.

#### Steering Public Opinion

There are some things connected with automobiling not to be found in any other line of industrial endeavor. The country is overridden by publicity exponents who undertake to guide public opin ion on the numerous questions that arise affecting automobiles, the makers and the This guiding of owners. opinion is conducted by sending out matter for gratuitous publication to all journals connected with automobiling, the publishers receiving thanks and the senders of

news payment as efficient managers of free advertising.

A steering of sentiment very noticeable this spring takes the form of open or covert attacks upon the Gliddon tour as a sporting event and of its managers for past delinquencies which appear to have been overlooked last year and therefore are desired to be all the more stringently dealt with in connection with this year's tour. People and publications that were obsequious in their praises of everything connected with the Gliddon tour last summer are this year doing their best to prevent automobilists from taking part in an event which hitherto has been so popular.

# agneson



Licensed under Selden Patent.

Critical judges agree that the 1907 Matheson is equal to any car built in the World.

The Matheson is not "thrown together." It is conscientiously and accurately built of the best materials procurable. .. ..

#### A CAR OF ABSOLUTE PERFECTION IN EVERY MECHANICAL DETAIL.

RUNABOUTS, TOURING CARS, LIMOUSINES and LANDAULETS

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St. Louis, Mo.—The Southside Auto Co., 2339 So. Grand Ave, Richmond, Va.—Motor Transfer Co.
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Calgary, Alberta, Canada.—A. S. Urquhart.
Watertown, N. Y.—Watertown Auto & Supply Co.
Cleveland, Ohio—Central Auto & Supply Co.
Cleveland, Ohio—Central Auto & Supply Co.
Newark, N. J.—Matheson Co. of N. J., J. B. Ryall, 9 Clinton St.
Jersey City, N. J.—Hudson County Auto Co.
Long Branch, N. J.—Long Branch Auto Co.
Baltimore, Md.—The Matheson Co. of Maryland (B. E. Wood Lumber Co.).

# PITTSFIELD SPARK GOIL

MANUFACTURERS OF



Goils **Timing** Devices Switches

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Our Coil is the most rapid, economical in battery consumption, most durable and reliable made in the world. Used exclusively by several of the largest and best automobile manufacturers in the

The Franklin Gar, which recently won the Economy Test, was equipped with our entire ignition Outfit - Golls, Timing Devices, Switches and Plugs

All we ask is an unprejudiced test to prove to you that our goods are what we claim

Automobile owners who have ignition troubles would do well to test this Goll

> Write for prices and description of our 1907 Ignition Products

Pittsfield Spark Coil Co.

PITTSFIELD, MASS.

#### A Trap Maker Caught

Sometimes the human animal displays decided asinine tendencies and glories in the folly. The latest individual to make his ears conspicuous to the automobile world is Thomas L. Masson, who spends his nights at Glen Ridge, N. J. Masson is editor of a reputed humorous publication, and he tries to maintain its reputation in his daily work and conversation. He was struck with the idea that it would be tremendously funny to egg on the Common Council of Glen Ridge to make raids on speeding automobilists and even went to the extent of paying the wages of two special policemen to watch automobiles passing over a measured mile. For two days the policemen watched in vain, but on the third day a motor car was seen emphatically exceeding the speed limit and the driver was promptly arrested. It turned out to be Mas-

ed. It turned out to be Ma

#### A Storm of Gush

New York was invaded last month by a multitude of peace makers and peace conservers, many of them like the rustic who swore he must have peace if he fought for it. We have no doubt that many of the men and women who effused themselves of platitudes concerning brotherly love have gone home as enthusiasts return from revival meetings, bowed down with emotion but no less ready than usual to trade horses that can stand without hitching.

The day of unbroken and universal peace among grown men will be coming when Jack no longer deserves to be spanked. We have General Sherman's authority that war is Hell, but it is possible to conceive of something even worse than

the headquarters of perdition.

There were at the peace meetings many heart-swelling speakers who are financially interested in death dealing agencies. We have looked in vain for the denunciation of war being followed by renunciation of the money making instrumentalities made for the purpose of keeping down the population of the earth. But we suppose they expect the public to distinguish between gushing sentimentality and business. There is decided difference between them.

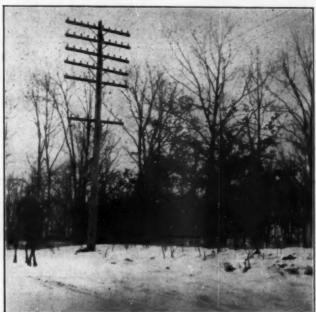
Gush-exuding people generally suffer from want of some useful purpose on which their superfluous emotion could be expended. One never sees an enthusiastic sport of any kind turned away through superfluous emotion. Tennis, golf, steering automobiles,

driving fast horses, yachting and even fishing are more wholesome than blubbering for the unattainable.

#### Chinese Dainties

Several years ago a British statesman who was visiting in China was treated with great courtesy by a certain Viceroy. When they were eating their first meal together, the Briton being curious to know of what consisted one of the dishes and pointing at it inquiringly said, "quack, quack?" "No," said the Chinaman, shaking his head, "bow, wow!"

When the Briton was about to leave he wished to convey to the Viceroy some token of his appreciation. So he sent the dignitary an uncommonly fine bull pup he had brought from London. In a few days came the Viceroy's ac-



MARCH SCENE IN NEW JERSEY.

knowledgment of the gift. "I myself am not in the habit of eating that species of dog, but I may say that my suite had it served for breakfast, and accord it unqualified praise."

#### Change in Firm Name

Paul L. Snutsel, Inc., has succeeded the old firm of the Snutsel Automobile Supply Company, the capital being \$25,000. In addition to the already large lines of spark plugs, it has taken the agency for the entire country of the Albright spark plug. Paul L. Snutsel, president of the new company, states it will remain the American agent for Mestre & Blatge, makers of ignition devices and batteries, and will also handle a number of French specialties, including a new line of tires. The B. P. G system of ignition also will be carried.

#### Learning the Art of Shaving

A writer in the London Chronicle asked a barber how shavers acquired practice, and the "artist" said that, oh, he got it by going to workhouses and prisons (where the shavees had no choice), by practising on friends, and fellow-apprentices at penny-a-shave shops. The writer gathered that the penny-a-shave people were not fastidious, and that a cut or two thrown in did not materially matter or add in any noteworthy degree to the sulphurous Saturday-night language. The shaver said that the manual dexterity was easily obtained; that the real difficulty was to keep the razor "in fine trim." "Genius," said the barber, "is called for. I have known men in the business for thirty years who couldn't keep a razor sharp."

#### A Stock Car Race.

A stock car race will be run after the Vanderbilt cup race this year. The American Automobile Association has given their sanction to this race and details will be arranged by the racing board.

Only stock touring cars will be eligible for the new race, but they will be equipped with racing bodies. Horse power will not be considered, the awards being made on the excellence of the performances based on cylinder displacements. race of three days, with a run of 150 or 200 miles a day has been suggested, the undesirable cars to be eliminated at the end of each run. The entry fee will probably be fixed at \$1,000 for each car, and only two cars can be entered by each maker. It is understood that three

firms have already made application to enter two cars apiece, and it is predicted that a large number of cars will take part in the race.

The ordinary automobilist is careless keeping the combustion chambers and cylinders of his car free from the carbon deposits left by burned cylinder oil. If every motorist would take the trouble to flush his motor with kerosene at least once a week, he would do more to keep his machine in perfect condition than perhaps in any other way.

The Auto Car Equipment Co., of Buffalo, N. Y., are building six 24 passenger terraced canopy top cars for Capt. Young's new million dollar pier at Atlantic City, N. J.

# AUTOMOBILE BARGAINS

We are the largest dealers in new and second-hand Automobiles in the world. Every make. Prices from \$150 to \$7,000. Complete list on request.

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IS THE EASIEST

of all instruments to Read from the Seas because the Pointer takes its place on the dial and remains periectly steady.

It instantly shows the slightest increase or decrease of speed, but neither swings nor dances around the point it is indicating, for the reason that it is directly connected to

A GOVERNOR THAT GOVERNS It must move exactly as the gov-

It must move exactly as the governor moves.

It is accurate and reliable because correctly constructed.

Every motion is balanced.

All working parts are of steel with hardened self-lubricating bearings.

A fine piece of mechanism which meets the approval of the mechanical experts.

It is covered by a businesa-like guarantee.

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You can put in more
money, but you can't
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50 Mile Instrument,
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WE CAN NOW MAKE
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# **Lexington Hotel**

JUST OFF BROADWAY ON 47th STREET, WEST, AND LONGACRE SQUARE

#### NEW YORK-



OPENED JAN. 1906

Absolutely Fireproof

> Unsurpassed Apartments

324 Rooms with **Private Baths** 

HIGH CLASS, UP-TO-DATE HOTEL

\$1.50 PER DAY AND UP European Plan

Within Five Minutes Walk of Eight Theatres SEND FOR SOUVENIR POSTAL CARDS

GEO. R. JONES & SONS

#### Superstitions Concerning Steam

Among the questions that came to this office for answer last month was one asking if it was true that James Watt was the first person to discover the power of steam, and if the story was true that his attention was first turned to the subject by seeing the lid of his mother's kettle jumping under the force of the escaping steam. We have repeatedly told that Watt was not the inventor of the steam engine, merely an improver, but it is difficult to get all our readers to understand this. The story of the kettle is a myth, and it is on a par with the story that Romulus was suckled by a wolf.

The expansive power of steam was understood long before our era began. There is good reason for believing that the pressure of steam was employed by the ancients in various ways, mostly to display mysterious phenomena. A simple form of steam engine was used in Alexandria more than 2,000 years ago.

Ewbanks, in his well known book on bydraulics, says that steam has been noticed ever since the first heating of water and boiling of food for domestic purposes. The daily occurrence implied by the expression (the pot boils over) was as common in antediluvian days as in modern times; and hot water thus raised was one of the earliest observed facts connected with the expansion of vapor. From allusions in the most ancient writings we may gather that the phenomena exhibited by steam were closely noted of old. Thus Job, in describing leviathan, alludes to the puffs or volumes that issue from under the cover of boiling vessels. (By his neesings a light doth shine), and (Out of his nostrils goeth smoke as out of a boiling pot or cauldron).

In the early use of vessels last named, and before experience had rendered the management of them easy and safe, females would naturally endeavor to prevent the savory contents of their pots from flying off in vapor, hence attempts were made to confine it by covers, and when these were not sufficiently tight, a cloth or other substance was interposed, and a stone or weight placed on the top of the lid to keep it tight. The pressure would increase, and more weights were added to hold in the vapor. This contest, when carried on by a determined housewife on one side and a hot fire on the other, led to domestic boiler explosions.

For many centuries foolish women tried to cork up the steam from the domestic broth pot, and accidents frequently resulted, but the real cause was not popularly understood. There came to be a belief that there was a wicked

spirit in a boiling kettle, and that in some cases the spirit was so violent in its disposition that it would smash things up and do great damage. It was only in comparatively modern times that common people learned that the steam from boiling water was a harmless gas when permitted to escape freely. This diffusion of knowledge relieved many a household from an op-Think of nervous pressive dread. housewives in every part of the world where food was cooked watching over the pot boiling the family dinner, and thinking a malignant spirit surging through the broth, threatening at any moment to burst forth and scald or slay the household! Shakespeare used automobilist out of a hole. One time I was running a locomotive on a branch where there were no repair shop facilities and the engine broke a link block. I made a mold, using the broken parts as a pattern, and filled it with babbitt. My impression was that the babbit block would work until an iron one could be procured. There was some delay in getting a new block, but the babbit substitute did so well that I thought no change was necessary and the babbitt block remained in use until the engine went to the shop for general repairs.

In another case later a valve stem gland broke and half of it was lost. I made a babbitt gland and it may be in use to-day.



ROYAL TOURING CAR OWNED BY HARRY CURTIS, OF THE D. L. C. AUTO CO., NEGOTIATING A BAD MUD ROAD IN ROCKLAND COUNTY, NEW YORK.

the prevalent dread of the boiling pot to produce an awe-inspiring picture when, in "Macbeth," he made witches dance around the boiling pot singing:

"For a charm of powerful trouble, Like a hell broth, boil and bubble; Double, double, toil and trouble, Fire burn and cauldron bubble."

#### Using Babbitt for Repairs

Editor AUTOMOBILE MAGAZINE:

Accidental breakages of automobile machinery may sometimes be temporarily repaired by babbitt metal, which can frequently be employed in places where forging and finishing a new part cannot be done. Babbitt metal when of good quality will stand harder strains than it generally receives credit for. I have never had to make an automobile part from babbitt, but I should not hesitate to do it if necessary.

Experience in making temporary repairs on locomotives with babbitt convinces me that it might often help an

#### The D. L. C. Auto Co.

A handsome, well-equipped renting garage has been established at 63 West 43rd street, New York, by the D. L. C. Auto Co. Harry Curtis, the well-known driver, who is the manager of the new concern, appreciates the advantages of having only first class chauffeurs, and in order to hold such men, has furnished a large room very handsomely for their use. The renting department contains the finest line of rental cars in the city. They consist of beautiful, high power touring cars, seating as many as ten people, limousines and rakish runabouts for gentlemen to drive.

Both foreign and domestic makes are to be found in the rental department, as well as in the sales department, where high class cars which have been used but little can often be secured at very low prices.

The American output of automobiles for 1907 is estimated at \$53,000,000.



# Will You Take A Motor Ride With Me?



# A Prize of



FOR THE BEST ANSWER TO THIS QUESTION

> WHAT IS THE BEST MOTOR FOR A TRIP LIKE THIS



THE publishers of AutoMOBILE MAGAZINE offer
the following prizes for
the best answers to the above

question.

The competition is opened freely to all who may desire to compete without charge or consideration of any kind, and that prospective contestants need not be subscribers to the publication in order to be entitled to compete for the prizes offered.

First Prize \$50.00 Second " 25.00 Ten next prizes of \$1.00 each

Everyone is invited to enter this contest. Simply write a letter naming the car you would select and stating why it is best. Letters must not contain more than 500 words. Contest will close August 15, 1907, and prizes will be awarded in the month following. Address,

Contest Editor,

Automobile Magazine, 136 Liberty St., New York City HIS is a genuine invitation. It is actually extended to every person in the United States who may read these lines.

During the next two years I expect to take a series of motor tours which will eventually cover every section of the United States. The trips will be partly for pleasure but mostly for

business. I have organized the National Association of Magazine Agents, the members of which are found in nearly every section of our country. So the chief object of my trip will be to call upon these widely scattered members and thus strengthen our association by some personal work.

I am going to earn the car in which I will take the tours by obtaining five thousand new subscribers to the "Automobile Magazine." Of course I expect that my fellow members of the association will help considerably, but I also invite everyone who reads this to join me in the enterprise. The publishers of the magazine have made their offer to me most liberal, so that I can offer everyone who gets even a few subscriptions for me a very liberal rate of commission. In addition to the commission

I WILL GIVE A CASH PRIZE TO EVERYONE WHO OBTAINS TEN SUBSCRIPTIONS.

There isn't one person who reads this who could not obtain at least ten subscriptions EASILY. The "Automobile Magazine" is the only really popular magazine of motoring at a popular price. There are other good magazines on motoring, but they are either too technical to be popular or else too high priced. Nowadays the interest in motoring is by no means confined to the owners of automobiles. In every community there are hundreds who will be glad to find a magazine which tells all about motor cars and motoring in plain, interesting, but non-technical language.

Of course I shall be glad to hear from everyone who is at all interested in my plan. Anyone who can spare a little time to look up the motor enthusiasts of his neighborhood can make a neat sum in commissions and prizes. I will furnish everything needed to conduct the work. Simply write me—a postal will do—and I will send you some sample copies, order blanks, etc.

When I take my trips I shall so arrange my itinerary that I may make a call upon everyone who aids me in this subscription campaign. So that is why I ask you to take a motor ride with me. Will you? If so, write to-day.

HERBERT HUNGERFORD, 828 Tribune Building, New York City.

#### Gearing Up a Lathe for Screw Cutting

By FRED H. COLVIN.

Having found the depth of threads and the size drill to use or hole to bore, we naturally come to the old but ever new question of gearing up a lathe to cut any thread within its capacity. This capacity is limited by or depends on the gears it has.

There are many new lathes where the gear problems are cut out by a gear box, where you simply move a handle to any thread on the index and you get just what you want, but there are still hundreds of lathes without this, and the question remains open just the same.

The first thing to do is to find out the lead or pitch of the lead screw and whether it is "geared even" or not. In other words, does the spindle and lead screw each make one revolution in the same time. If they do, then we are started right, and have no further complications, except to find the gears.

If they do not, we must find the "equivalent" dead or pitch by putting on even gears, say, a 36 on both lead screw and spindle, and see what thread it cuts on any piece of metal. This is the "equivalent" pitch of lead screw, and what we have to reckon with.

If the lead screw has four threads to the inch and it cuts a 4 thread, it is geared "even," but if it cuts an 8 thread it is geared "two to one," and 8 is the equivalent thread, and the one we must use in our calculation.

You can arrive at this same conclusion by figuring the gears between the spindle and lead screw, but it is a whole lot easier to cut a thread and it avoids all the mistakes that might creep in. But be sure and put even gears (no matter what number of teeth, so they are alike) on both spindle and lead screw.

Having found that the pitch of lead screw to be considered is 8—either because it is geared even or from cutting a thread on a piece of metal—we are ready for business.

Suppose we want to cut a 4 thread. Isn't it clear that, as the lead screw will cut an 8 thread when geared even, that it must be made to move twice as fast as the spindle to cut a 4 thread, because a 4 thread is twice as fast a pitch as 8 threads?

Now, we know that if we drive a 12-inch pulley with a belt from a 24-inch pulley on the line shaft, that the 12-inch pulley will make twice the number of revolutions that the 24-inch will. This is simply because the distance around the 24-inch pulley is twice that of the 12-inch, and it must turn twice while the other is turning once.

It's the same with gears.

So, if we put a 48-toothed gear on

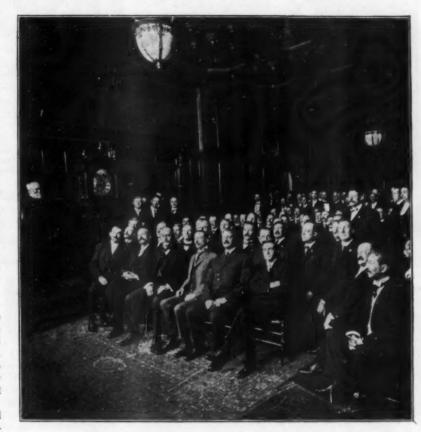
the spindle and a 24 on the lead screw we know it will turn twice as fast as the spindle, and consequently must cut a 4 thread.

If you want a 16 thread you simply reverse these gears, because 16 is only half as great a pitch as 8, and the screw must turn half as fast as the spindle.

We see from this that when the thread to be cut is finer than the equivalent lead screw pitch, the larger gear goes on the lead screw, but when it is coarser, the larger gear goes on the spindle. This precaution is given because the writer has seen good work

and 28 on the lead screw, which shows that the gear obtained by multiplying the thread to be cut always goes on the lead screw and that obtained by multiplying the pitch of the lead screw always goes on the spindle.

Instead of multiplying by 4 we could take 3, 5, 6, 7, 8, or any number; but multiplying by 3, 5 or 7 gives us 21, 35 or 49 for one gear, and we are not apt to find odd toothed gears in a lathe set. So it is usually best to take even numbers and as low as possible. It's a good plan to try 4 first, as it usually works out.



Andrew Carnegie Addressing the Representatives of Capital and Labor in His Home. From Stereograph, Copyright, 1907, by Underwood & Underwood, N. Y.

spoiled by the lathe man putting the gears on wrong. He had figured them out right, but had not stopped to think which should go in the spindle.

Suppose we want to cut a 7 thread. We could go through a lot of calculations and show what relation they bore to each other, but it isn't necessary.

Just take your thread to be cut and the pitch (equivalent lead) of lead screw and multiply them both by any number, no matter what number, so long as it gives you gears that you have on hand.

This gives us 7 and 8. Multiply these by 4 and we get 28 and 32. As the thread to be cut is faster than the lead screw, we put 32 on the spindle

Here is a 13 thread to cut, what are the gears?

Multiplying both 13 and 8 by 4 gives 52 and 32, both even and likely to be in the set. If not try 6 and get 78 and 48, and so on, until you get it if there are gears there, which is not always the

Suppose you want to cut 11½ thread, which is a standard pitch for pipes from 1 to 2 inches, inclusive. Most lathes have gears to cut this, but all do not.

Multiplying 11½ and 8 by 4 we get 46 and 32, which all lathes do not have, but in one case I knew there happened to be a 23-toothed gear. So the machinist threw in the compound gear, which



EXPERT LAMP MAKERS-not ordinary mechanics or tinsmiths.

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great we had to open it there because lamp makers of the high quality we wished to employ would not leave New York City.

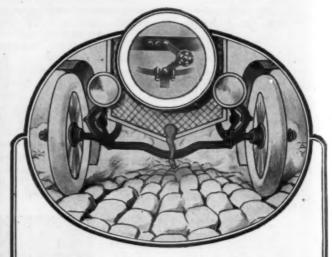
Solar Lamps and Generators are made from fewer pieces than any other make on the market. Our large twenty ton presses draw the heavy brass into the proper forms and these pieces are riveted or screwed together.

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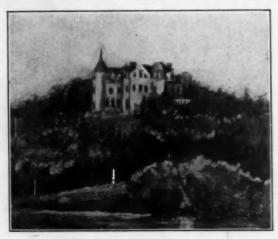
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FOR THIRTEEN YEARS we have been making (not assembling) automobiles, always under the keen eye of Elwood Haynes, the original genius of the company, and the pioneer to whose resource and inventiveness almost every automobile in America is, in some respect, in debt. The old situation-Haynes perfecting, rivals afterwards copying-exists to-day.

Take our rear axle roller drive, for instance. This feature is unique in the Haynes. It takes the place of bevel gears and makes feasible the previously impossible high-power shaft-driven car.

It was this Model T that upheld the Haynes reputation for reliability in the Vanderbilt Cup Raceour regular stock model-the only stock car in the race.

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reduced the speed of the lead screw one-half with reference to the spindle, put the 23-toothed gear on the lead screw instead of 46, and went ahead.

Quick pitches do not often occur in railway work, but you may want to know how to handle them just the same, so we assume a special screw with 1½ threads to the inch. We cannot multiply by 4, as we have no gear less than 24, as a rule, so we multiply by 16 and get 24 and 128. If you have 128, this lets us off easy, but the chances are you haven't, so the compound gearing comes in again, this time reversed, so as to move the lead screw twice as fast as the spindle.

This practically makes the lead screw 4 instead of 8, so we multiply over again and get 24 and 64, which we have and our troubles are over.

Compound gearing is usually 2 to 1 in., so as to either reduce the equivalent pitch one-half, or double it, depending how it is used. This makes the pitch equivalent to 4 or 16, as the case may be, and you can figure from that basis. If any other compounding is used, such as 3 to 1 (which would be awkward in most cases), or 4 to 1 (which is very seldom needed), proceed in the same way.

So, when we come to look into the heart of screw cutting it is very simple, if we only grasp the principle and it is this which I have endeavored to make clear.

As in all sorts of calculations, and in mechanics generally, it is necessary to reason things out as we go along, and if this is done you will have no trouble in cutting any thread the boss wants, providing you have the gears for it.

A New Jersey legislator has introduced a bill putting a tax on whiskers. When a New Jersey solon tries to introduce a new law it may safely be assumed that he expects to receive personal benefit therefrom. Barbers are not numerous as a voting power so we give up the guess that the anti-whiskers legislator is seeking the votes of adherents of the striped pole. He is probably merely purchasing cheap notoriety.

Vicar—I am so glad your dear daughter is better. I was greatly pleased to see her in church this morning, and shortened the service on purpose for her.

Mother of Dear Daughter—Thank you, Vicar. I shall hope to bring her every Sunday now!—Punch.

With the opening of the European racing and competition season the new regulations of the automobile club of France, requiring every driver to have a license, come into operation. This rule will apply to Americans.

#### Coming Events

May 29-June 1—Irish Automobile Club Reliability Trials.

June 3-12—Herkomer Cup, Automobile Club of Bayaria.

June 8-670-Mile Ocean Motor Boat

Race, New York to Bermuda. Motor Boat Club of America and Royal Bermuda Yacht Club.

June 14—German Emperor's Cup, Taunus Circuit, Imperial Automobile Club.

June 24-29—Scottish Reliability Trial, Scottish Automobile Club.

June 25-July 8—Grand Prix, Automobile Club of France. (Exact date to be decided upon.)

Aug. 11-20—Coupe d'Auvergne, France.
Aug. 18-22—Ardennes Circuit (Belgium) and Coupe de Liedekerke.

Sept. 2-6—Jamestown (Va.) Exposition, Motor Boat Races.

Sept. 14-15—Mont Ventoux Hill Climb. Sept. 15—Sommering Hill Climb. Oct. 20—Gaillon Hill Climb.

York, Pa., motorists will have an endurance run May 6 and 7, open to automobilists from five counties of that State.

Many accidents happen in the storage of gasolene through people using poor storage accommodation. In case that the storing of gasolene is necessary it might as well be done safely. If you ask how that can be done we answer use the Ideal Gasolene Tank, Meadville, Pa. We use a tank of that kind.

We are told that a tilt occurred among the officers of the Daughters of the Revolution in a meeting held at Washington last month, and that there are violent animosities in action that prove the Daughters to be worthy of their fighting sires. These women devote time and temper on stirring up vindictiveness concerning past mistakes that might better be left to repose in the sleep of oblivion. Those people suffering from superfluous energies ought to take up golf or automobiling, amusements that would be found more wholesome than raking up ancient enmities.

The following New Yorkers have recently purchased automobiles: Mrs. Robert Stafford, a 1907 Franklin touring car; H. H. Benedict, a 1907 Pierce Arrow; A. C. Ayres, a 1907 Winton; Dr. Gorham Bacon, a 1907 Mitchell; S. A. Walsh, Jr., a 1907 Oldsmobile; J. H. Tooker, a Thomas touring car; Lindsey Toppin, an Oldsmobile touring car; F. S. Hastings, a Stevens-Duryea touring car; Arthur G. Fitzgerald, a Pope-Toledo; John H. Hindley, a Stearns touring car; Frederick A. Dallett, a Reo.

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Blowout Patch	
*New Cylinder Comptroller	
Show Committee Appointed	-
New Shock Absorber	
*New Home of the Automobile Club of	
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More Automobilists	
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One of the "slickest" cars in this neck of woods is the convertible Knox just received by the Ellis Motor Car Company, the Newark agents. The car is of 30-horsepower and is so arranged that in a few minutes the car is converted to or from a two-passenger runabout or a five-passenger touring

A comprehensive exhibit of the manufacture of denatured alcohol will be made by Germany at the Jamestown Exposition.

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